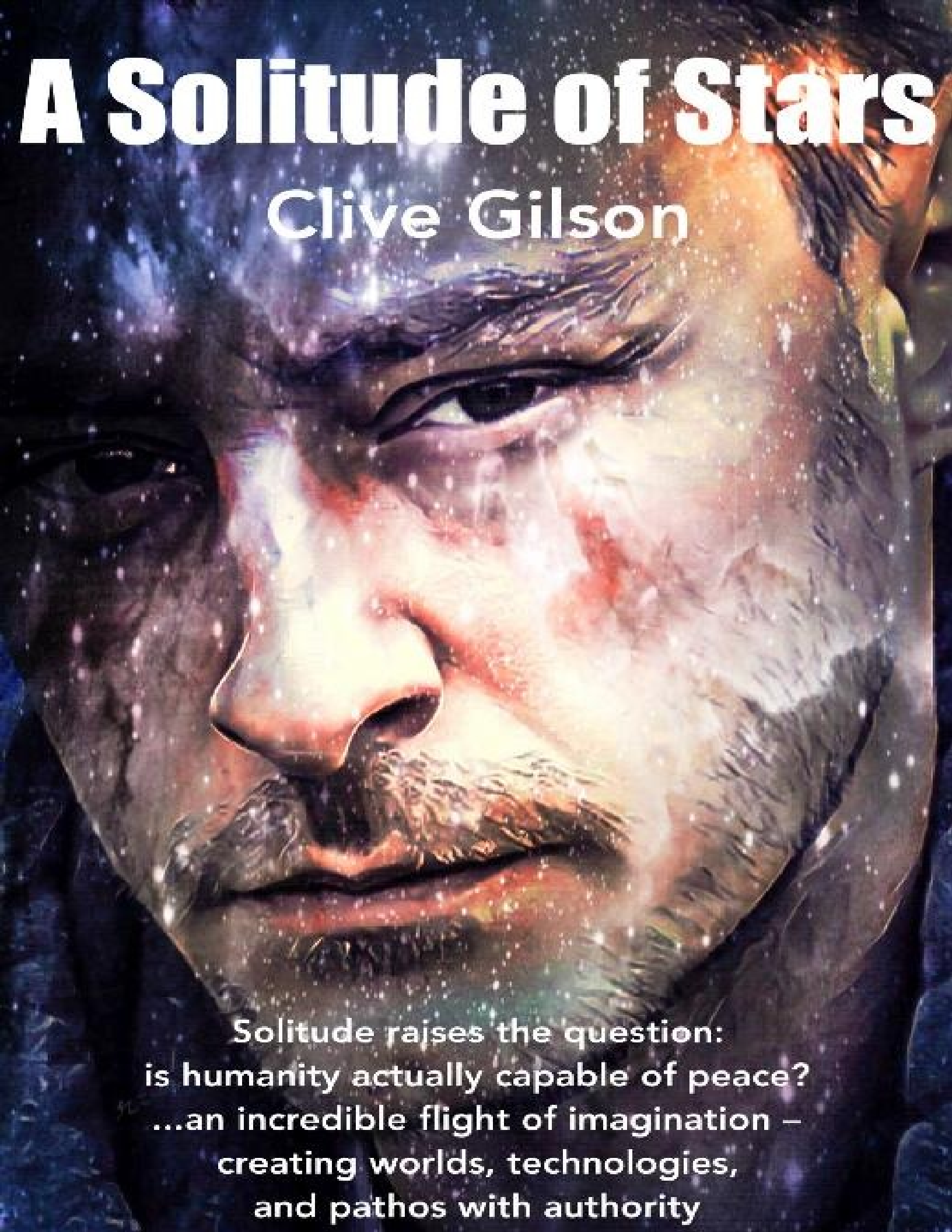




A Solitude of Stars

Clive Gilson

**Solitude raises the question:
is humanity actually capable of peace?
...an incredible flight of imagination –
creating worlds, technologies,
and pathos with authority**

I have edited Clive Gilson's books for over a decade now – he's prolific and can turn his hand to many genres: poetry, short fiction, contemporary novels, folklore and science fiction – and the common theme is that none of them ever fails to take my breath away. There's something in each story that is either memorably poignant, hauntingly unnerving or sidesplittingly funny. *A Solitude of Stars* is no different. With deft turns of phrase and an imagination that would make Philip K. Dick jealous, Gilson foresees a dystopian future, the seeds of which are definitely being sown right now. The story is a chilling glimpse of what may come to pass, warmed by a thread of love that raises the narrative beyond despair. A riveting read.

Lorna Howarth, *The Write Factor*

Also by Clive Gilson

FICTION

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A Solitude of Stars

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More Tales About Saints and Scholars

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More Tales About Snow and Ice

A Solitude of Stars

CLIVE GILSON

 SOLITUDE

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ISBN: 9780463272954

For everyone who, like Tahir Shah in Arabian Nights, thinks that "Stories are a communal currency of humanity."

Contents

[Transcript](#)

[Arkland](#)

[Bootneck](#)

[Angels](#)

[Charlie Foxtrot](#)

[A Solitude of Stars](#)

[Iceheads](#)

[Splendid Cities](#)

[Headshed](#)

[Heavenward](#)

[Metanoia](#)

[Brain Glue](#)

[Nelson's Blood](#)

[Touched](#)

[Muckers](#)

[Second Skin](#)

[Over The Hill](#)



Transcript

(Jeung Xhou's Story)

Recomposed and interpreted from fragments (stat data, end text), heuristic recognition (AI enhanced). Output: personal record (interestingly stylised). Zhou, Jeung (LT PCorp), MIA - Pres. Dec.

YOU WAKE UP WITH the subliminal hum of engines in your head. Shifts are changing. Hot-bunking. Space is at a premium, the notion of which loses its humorous appeal after a few days and nights on the ship. Not that you can tell day from night here. There are no windows in the pressure hull. There is nothing to see beyond the infinitely shaded greys of bulkhead and console, beyond the mnemonics, codes and glyphs that shine upon screens and control pads. Star-shine seen with the naked eye, burns retinas to a crisp. And then alarm bells ring. A weary looking head appears, poking through the curtains that screen your bunk bed from this grey-green world beyond. Rough hands nudge you awake. You pull the curtain fully back and see a gaunt face covered in stubble and grime.

We live in world where regular time is measured by eight hours on and eight hours off, an endless rotation of bodies filling spaces too small to be anything other than a brief and fitful respite from the grind of the watch. Life on board is about orientation. You learn quickly not to sit up. The bulkhead above the top bunk dents your skull. After a couple of days nursing a headache, basic instinct cuts in. One man rolls onto his front, swings his legs out of the bunk and another man climbs into the stinking warmth of the bed. Eventually you become so tired that you're asleep before your head hits the saliva-stained pillow. This is daily life on K-47, a Hunter-Killer, Dirigiste Seventh Fleet, on convoy attack patrol right out at the edge of the Kuiper Belt, a lone wolf hunting amid the ice worlds. We are all at sea in a silent storm, on the very edge of our slowly revolving, ecliptic star-ocean, where our still intrinsically flat earth civilisation meets the terrible, mechanistic reality of the Outworlds.

Get a profession, my parents said, something safe, a way to earn a living without venturing off Gaia. It's a cultural thing, I guess. A desire for solidity and stability. A direct attempt to head me off from that fly-by-night military jingoism. Journalism is my bag. After college, I spent two years as a cub reporter on independent network news and then came the inevitable conscription. I have

a profession, a track record. I spent those heady two years as a civilian reporter drinking and screwing my way around navy ports; two years of reporting on ship movements, tragic losses and heroic returns. I loved the dirty bustle of the space ports, where life is black and white. You learn or you burn. When the call up came, the recruiters smiled sweetly and told me to join one of the Dirigiste Navy Tri-D crews. My first assignment? Embedded on a glory ship. My name is Jeung Zhou. This is shit.

*

You have an image in your head as a kid; shiny surfaces, flashing lights, metallic voices and red-shift, of something clean and bright and deadly. That's just science fiction. Sure, the big guns, the capital ships, they look impressive on the surface, and complex systems do have a beauty all their own, especially when they ride across the skies in vast tonnage, but the reality of war is never like those old films. This is the cutting edge, the exposed blade, serrated and notched, unsheathed and inimically bloody. There's a smell about the place, a rotting drift that you would think impossible to live with, but it only takes a day or two to get used to the stink.

I am, technically, a junior officer, one of thirty-one souls on board the K-47, which makes the mess spaces a little cramped. A K-Ship runs double-banked shifts of fifteen officers and engineers at most; the officers comprising the Captain, First and Second Watch Officers, and the Chief Engineer. Only the Captain gets a cabin. The rest of us make do with bunks slotted in around machinery that never sleeps in its effort to keep us alive. The designers of this bucket made some allowances for the necessities of life, though, and the heads are clean and sufficient, although showers are rationed to one per crew member every four days. Grey water. Nothing beats the simple luxuries. In truth, we can keep clean in other ways, but there's something incredibly humanising about a hot shower, so long as you don't dwell on the fact that everything on board is recycled.

The officers' ready room, which doubles as our small but reasonably private mess, is in the central section of the ship, just to the rear of the main control room. What passes for breakfast is already underway when I swing myself through the pressure door bulkhead. Silence. The Chief is concentrating on spooning soup into her mouth, and the Captain is scanning through daily orders. Lewis, the Second Watch Officer has already eaten and hit the sack. Dewey, our good 'ole Louisiana homeboy First Officer, is on the bridge. You have to be thankful for small mercies in a place like this and elbowroom is definitely one of those mercies. As I slide into the space recently vacated by Second Officer Lewis, the replicator panel is already rising at the far end of the table. The soup is hot, but that's about all you can say in its favour. Food is basic out here, full of the necessary proteins, carbohydrates and vitamins needed to sustain a body, but

hardly a highlight of the day.

The Captain, who is generally referred to as the Boss, looks at me and grins. “So, Newbie, sick and tired of all these drills?” Standard Dirigiste inflected Anglo. Germanic undertones.

We’ve been on patrol, wandering across and around the ecliptic for six weeks without a sniff. To keep the crew on their toes the Boss has had us on crash drills, attack drills and emergency manoeuvres almost every shift. You can tell when he’s planning something. There’s a look that passes between him, the Officer of the Watch and the Chief, a wry little smile that marks the moment when the alarm is sounded, orders are coded and the core AI broadcasts messages across the ship’s communications system:

“Cloak! Run silent! Brace for impact!”

These sequences and call-outs are a throwback, an accommodation for frail bodies, a means of galvanising and reassuring a hairless ape who has the audacity to travel the heavens. We are, this skeleton crew, insurance, a maverick thought amid the Artificial Intelligences that run the ship. We can do the unexpected, and it’s precisely those random variations that will bring us home alive and kicking. At least, that’s the theory.

It’s also a commentary on the comparative norms out here. The Apparat, or as we generally call them, the ‘Iceheads’, have been our enemy for some three hundred years now, and have chosen to go down the route of augmentation and adaptation. They are, allegedly, one organism, some sort of hybrid organo-tech bent on some weird evolutionary jihad. To be honest, no one I’ve spoken to on the ship really believes these extremes of Dirigiste propaganda, and I’ll probably earn myself a bout of political reorientation for saying it, but out here, right now, no one cares. The Iceheads are just people, like us, trying to survive the best way they can. We’ve kept the human element essential and fragile and unaugmented because we outnumber the Iceheads by sixty-to-one. We can afford the luxury of our apparent mutability.

The Boss makes a couple of audio notes to the daily orders, folds and tucks the tablet into his jacket pocket and slides out from the table, heading for the bridge at the prow of the ship. Before he disappears forwards through the next pressure hatch, he turns and says, “We’ll see whether you’ve got the stomach for the navy eh, Kinder?”

The Chief wipes the last of the soup out of her bowl with a hunk of shroom bread and sucks it dry before swallowing it. She wipes her chin with the back of her sleeve and she too slides out from the table. She raises an eyebrow as she leaves the mess, muttering, ‘Poor sod,’ to herself. She goes aft to check on her beloved field generator. I don’t know if she means me or the enemy.

That's it, the sum total of the morning's conversation, so I finish my soup alone, feeling the heat of the liquid settling in my stomach as the daily butterflies start to rise. The excitement of the chase. God alone knows what the kill will feel like. There is no God, of course, not in Sol Dirigisme. I guess I'm really praying to my inner demon...

*

By the time I've finished my breakfast the hum from the engines has risen in volume, and so has the general buzz in the atmosphere. The sound of boots on the raised metal gangways is more urgent than at any time since I came aboard. I can hear an edge in every conversation. Faces that have been showing signs of fatigue and boredom are harder and more focussed today. I can hear the Chief up in the control room running through systems checks. A couple of ratings from the previous shift have taken up station by one of the heads to make sure they don't get left out of the action. Like a choirboy at his first Sunday morning service, I straighten my uniform jacket before seeking permission to enter the bridge.

"Permission to come for'ard?"

A look. Dewey grins. "Granted." New Orleans. That unmistakably lilting southern drawl.

I have adopted a small space by the navigation workstation, somewhere I can perch and watch the bridge crew in action without getting in the way. The bridge is wider than the main concourse, filling nearly the whole width of the ship's cobra-cowled forward deck. The Boss sits in the command chair amidships, surrounded by consoles and touch screens showing tactical and status data for key operational systems. To his rear, the Chief will take up station at the main engineering control. To his left and right are the navigation and weapons systems supervisors and in front of him is the main helm. Behind us and along the ship's length the remainder of the crew attend to sub-controls and workstations dedicated to the art of concealment and death.

Dewey takes a couple of paces towards me and leans into my cubbyhole. "Convoy. Five hours dead ahead. Fat and slow."

The Boss sits impassively in the command chair watching figures and tactical displays spin and fall. "Port one-four-seven, vertical two-zero. Vectored."

Dewey breaks off from our brief conversation and repeats the order to the helmsman. "Port one-four-seven, vertical two-zero. Vectored".

From the helm comes a direct reply as the new coordinates are entered onto the touch screen console. "Port one-four-seven, vertical two-zero. Aye Sir."

The cycle repeats. "All ahead, mark one-five; All ahead, mark one-five; All ahead, mark one-five. Aye Sir."

This bit is like some of those old, flat films and early Tri-Ds, except that this far out from our target, the commands are actually plotted by the ship's AI and merely confirmed by a human voice. It's a fail-safe, another throwback designed to keep the human element relevant. The skill of the helmsman only ever really matters when we're about to die.

The hum from the field generator bursts through the sound-proofing under our feet and we can feel the ship being hauled through space by the energy field that encases us, providing motive power, defensive shielding and, if invoked, our cloaking device.

The Chief enters the bridge and reports. "All systems A-One, Captain. Ready for deployment."

The Boss turns in his chair, looks at Dewey and nods. "Cloak!"

The Chief sounds an alarm and we hear computerised communications bounce off the thick metal walls of the hull. The lighting code shifts to pre-attack blue. While I try to adjust to the subtle change in the ambient lighting, First Officer Dewey relaxes and leans against the bulkhead from behind which I am recording the activity on the bridge and adding my verbal mark-up.

"D-E-W-E-Y. Make sure you get that right, Newbie. I want the girls to know what a hero I am, get my drift?"

The Chief snorts audibly in the background. There is a new sense of urgency about everyone's movements and I ask Dewey about the attack.

"You've got to remember this baby is built for speed. Basically, she's one fucking big engine and we're riding piggyback. Right up until we attack it's all pretty much machine code. The convoy is making mark zero-one. He looks at me, assessing the depth of my navigational knowledge, and adds, "For the record that's one-percent of light. Anything else in our fleet would take twenty, maybe thirty hours to make contact from where we are. We, on the other hand, will be sitting right up their pretty little ass in under five. That's why we're cloaking now. At this speed we'd light up on their far-scans way before we get in range. So, what we do is pull the skies around us nice and tight, then we go hell for leather until we're about two-hundred thousand clicks out, tucked up in our own little world.

"Then, Newbie, we slow it all down and ease in underneath their exhaust signatures. They're freighters, old tech, atomics and fusion-ion drives. Perfect cover if the cloak is working properly. There'll be a bit of cat and mouse with the escorts, but we'll get right in and, depending on the landscape, we'll do them one way or another. Then, Newbie, then you'll see just how good the Boss is. When their escorts get over the shock they'll be pretty mad. Getting all of us in this very expensive cigar tube out of there, that's what the Boss gets paid for."

I nod and blow out my cheeks. It's all recorded and filed.

"And if I were you I'd get your stories bedded down snugly in that little black box of yours. If the Boss fucks up, then your wee, indestructible bag of tricks is about all that'll be left of this old girl." He pats the bulkhead above my head, grins and returns to his station next to the Captain, who has been listening in on our conversation and is grinning at me too.

I check my screens. Everything I see and hear is recorded by my eyewear, which also provides a limited set of command and control mechanisms for the devices secreted about my body. I get data readouts from ship systems too so that I can flesh out the story. I check that the recording icon is active and that the connection to my Q-Spin storage is still coherent. The Q-Spin is the little black box that Dewey was referring to. Systems in the green.

The peace of the bridge, the peace that wraps itself around me with the hum of the engines, disintegrates slowly as my sense of true fear rises, and the cool blue light turns ice cold. I feel sick and make my excuses, saying something about the report, gulping in stale air as I stumble back to the officer's mess. On the way to the mess a couple of time-served ratings wink at each other as I pass. I hear something about sorting the men from the boys and I try to smile, but I can feel that facial expression only as a child-like grimace, as a juvenile death mask. As the Captain said over breakfast, we'll find out if I have the stomach for a life in the navy, and given the cold sweat pooling under my armpits, I pray once again to that singular and largely forgotten God to make sure that these infernal bloody machines break down long before we get anywhere near the killing zone. The Chief, damn her soul, makes sure that the machines work perfectly.

*

I spend thirty restless minutes in the officers' mess with my eyes shut, and then try to shock my body back into some sort of shape with two thick, black espressos. I have no idea if there is actually any real link back to the coffee bean aboard the K-47, but the machine delivered synth does the trick anyway. I start to feel stupid and ashamed of myself. I spend another half hour re-running recordings, editing and splicing, adding my own notes and thoughts to the media collected so far.

I'm in two minds about whether I should report back to the bridge when Lewis pokes his head through the doorway fresh from his bunk. He can't sleep. He tuts, loudly. He joins me over a third coffee, complaining about all this bloody noise. His body odour mingles with the bitter smell of the strong and supposedly Colombian brew.

I unburden my soul to a fellow comrade in arms. "What's happening to me? It's all so bloody confusing. I feel like I'm suffocating under a blanket of white noise... like snow... that, or it's the sound of the blood pumping in my temples

and I'm about to have a stroke."

Lewis slowly stirs sweetener into his coffee. "Too much caffeine. Don't worry. It gets to us all. My first time out in one of these – K-94, a Type One – I had to change my trousers after my first counter-attack. Bloody awful. Pissed myself. It's okay, though. You get through it. You won't believe the punishment these old girls can take. Mind you, the Type One was pretty basic. No cloaking. Pure, raw speed: in, kill and get the frig out. It was okay in the early days, but the Icehead tech-heads worked out how to deal with us. This little baby, though, she's tough. This is our third patrol." He runs a loving hand over the alu-mix wall. "Type Three. As fast as you get and you can't beat the field generator. State of the art."

My left eye blinks instinctively as I reactivate the main recording device and download this last conversation from the incidental buffer. This is history. I want to make sure I've got it all. "What I don't understand is why it's so cramped, so basic?" I ask.

Lewis sips hot coffee and mulls it over for a few seconds. "The exigencies of war, my friend... Or, to put it another way, we're losing. We haven't got much time left now. Iceheads have stepped up their game. K-Ships might make the difference, though, if we can build enough of them quickly, but it's going to be touch and go. So, what's important? Crew comfort or tonnage destroyed? The equation is simple. Make the machines as quickly as you can and strap the fewest number of men into them to get the maximum bang for your buck.

"You do know, don't you, that sixty percent of crews don't make it through a five-year tour?" From his jacket pocket he pulls out a hip flask. "Take a shot and get back up there. And remember, this is the Boss's fifth excursion in a third-gen K..."

I taste brandy. Aromatic and soft. I've drunk enough port-side synth to know excellent, real-world quality when I get the chance. I feel the warmth of the VSOP coating my throat and gullet before settling in my stomach. The pounding in my temples sparks once, twice, and then starts to recede as basic alcoholic biochemistry gets to work. I smile at Lewis, take another quick nip, and make my way to the heads.

*

A while later, the Boss spots me on the threshold of the bridge before I have time to request permission to enter and he waves me into the room. As he does so, I am met by a sea of faces, most of them leering at me. Initiation. The Boss nods a couple of times.

"Our new boy has balls, ladies and gentlemen!" He laughs dryly and resumes his watchful surveillance of the tactical displays.

I settle into my cubbyhole, feeling a wave of embarrassingly warm camaraderie

wash through me, although that might also be due to the lingering effects of Lewis's shot of brandy in the mess.

The ship burns with expectancy. The engines purr as we hurtle through black space, cocooned within our field, a field that, to anyone on the outside, looks just like any other patch of emptiness. In moments and circumstances like these, when the ghosts in the machine are nowhere to be seen, you really start to believe. It takes three massive Q-Luminal multi-processor arrays controlling a series of field generation blisters on the outer hull to mimic the full expanse and density of empty space. Nearly one third of the ship is dedicated to the field control system. The rest of the ship comprises the field generator itself, the weapons systems and one long, thin deck on which the crew exist for months at a time.

Over the next three hours we close in on our prey, and as more thick black coffee does the rounds, I begin to see why the crew draws so many parallels with those old stories of the wolf packs operating in the Atlantic at the beginning of the Anthropocene. Names and designations. Terminology. The whole kit and caboodle. We have become quantum-electro-mechanical wolves.

A succession of manoeuvres, of course plots and subtle shifts in our field engagement, lead us to a point where the AI begins the attack run. The Boss grows visibly paler as we approach the convoy, as though he is replacing the blood in his veins with iced water. Behind him the Chief is scanning the field status monitors and barking orders back to the midships field control room. She works directly with the AI, and occasionally she trims the ship manually to achieve subtleties of balance across every system. The Chief will give us the best advantage that she can.

The ship has become a single entity, a calm and efficient little universe; a universe of command and order. The Boss finally assumes manual combat control.

"Ahead, zero-six; Ahead, zero-six; Ahead, zero-six. Aye, Sir."

The ship decelerates rapidly and I can feel basic Newtonian force acting on the contents of my stomach despite the corrective action of the inertial G-dampers. The Boss lines us up.

"Chief, have you got a handle on the exhaust signature? The big beast, third left of the main group, dead ahead."

"Calculating... Got it. Aligning phase-in for shields, give me a second... ready, on your mark."

"Number One, get us to the edge and feed us in nice and slow."

It begins. AI and human at the cutting edge. We have become a symbiotic dealer in death. We tag onto the wake of the convoy and gently merge our cloak with

the exhaust signature of the heavy metal in front of us, mimicking all the while every subtle shift in our immediate environment. We use near-scan to keep a weather eye on the escorts, which number three destroyers and two fast pickets on flanking duty. Twenty thousand clicks become fifteen, then ten, seven, six. At five thousand clicks we are in absolute, nightmarish range and the Boss calls up the tactical weapons display, relaying orders to the weapons operator, who enters tactical options into the command system so that the AI can run plot simulations and make ever more refined tactical recommendations.

Four thousand clicks. The walls start to close in on me as the bridge crew work silently and efficiently, every one of them focused, running on pure adrenaline and the certainty drilled into them by hundreds of attack drills. I can feel the heat rising and looking down, I can see wet patches blossoming on the shirt underneath my open jacket. Running my finger around my collar simply distributes the sweat more evenly. The liquid seeping out of my body has drained my mouth dry. My tongue feels like old shoe leather. Looking around the bridge I am comforted by the fact that everyone else in shirt-sleeves is as damp as I am. Still no firing plot. Three thousand clicks.

“Shit!” The Boss leans forward. AI tactical scan data flashes brightly to his left-hand side. “Run Silent!”

Lights shift to red. Computer minds grind in fantastic whirls of hard light and shaded subtlety. Unlike ancient submariners, silent running means that all external scans and counter-measures are killed. Sound is immaterial. We exist within our all-encompassing cloak, blind as a bat, but with our ears cocked for the sound of heavy footfalls over our shoulder.

“Destroyer peeling off and dropping in behind us,” Dewey explains. “Thing is, we don’t know if it’s seen us or if it’s routine. They drop back in rotation every couple of hours to see if anyone is following. Standard defensive tactics.”

I struggle to make my mouth work, swallowing hard to force the glands in my mouth to produce saliva. My heart is thumping in my chest. “How do we know...?”

“If you see a very bright, white light...” Dewey pauses – I nod my head involuntarily before he deigns to complete the sentence – “...then you’re dead.”

Bastard!

He laughs out loud. “Only way to know for sure. If you’re still looking at my perfectly chiselled features in ten minutes time, then chances are they’re none the wiser. Tick-tock, tick-tock.” The bastard is grinning like the proverbial Cheshire cat.

*

A kilometre is an arbitrary measure of distance out here. The destroyer remains

on station at the rear of the convoy for twenty minutes before swinging back out into a standard defensive flanking position, during which time we drift underneath the boardwalk, crawling ever closer to the tight little knot of ships bobbing around at the edge of the inner Sol planetary system. I can't take my eyes off the ship's chronometer. With every minute watched I feel a weight settling upon my shoulders. I yawn. Nerves. I feel embarrassed again.

Warfare at this distance is a strangely quiet affair. Commands are almost whispered on the bridge. We manoeuvre slowly to protect our cloak of invisibility, careful not to distort the empty view of the universe that our enemy is watching so intently. One false move, one sudden jerk or jolt, and the reflective patterns woven by our cloaking shield will fluctuate for a microsecond, breaking us out of the galactic weave in that minimal time lag between the generation of our computerised simulation and our physical reality.

The Boss strokes his stubbled chin and checks the tactical displays for the thousandth time this morning. He knows the game inside out but he wants reassurance. "Weapons, give me firing patterns."

"Range five-forty clicks. AI reports too close for energy field burst. Torpedoes armed and ready. We'll have five seconds from reveal, two full patterns of eight, then, this close, we'll have to crash."

At the answer, the Boss lets his head fall so that his chin rests on his chest. He rubs his eyes with the palms of his hands. He turns to look at Dewey. "What do you think?"

Dewey is tense and watchful. "We could drop back, manoeuvre around them and burst from a safer distance."

"We could. Nav, what do you think?"

The navigation officer checks readouts on his screens. "Too close to the Belt. Field echo would be too strong." He points at a series of markers on the near-scan monitor. "And the escorts are on permanent defensive rotation. Too many negative variables."

"Damn bloody escorts. They're getting too good, ja? I don't fancy torpedoes from this position. Five seconds is enough for a fix. We're too exposed back here. Scheiße!"

The bridge is silent save for the hum of air-conditioning fans and the quiet ticking sound-effect of the digital chronometer on the wall above the firing position. The Boss fixes me with a cold look through tired eyes and speaks softly. "Is the cloak good, Chief?"

She mumbles an affirmative.

"Make bloody sure it is. Inch us in Dewey, right into the middle of the hen

house. Nice and slow, I don't want any unexpected interference with the field."

This attacking option means weaving in and out of the shadows. We manoeuvre slowly, oh so slowly, with every course correction timed with AI precision to ensure that our cloak remains undetectable. The convoy occupies approximately five hundred cubic kilometres of space, with the freighters running in fixed but staggered positions as we glide into their midst like a fingersmith. The Boss is going to pick their pockets clean. With nothing but passive near-scan, stealth, and a mixture of intuition and long years of experience it takes half an hour for the ship to reach our ideal firing point. Our position right at the heart of the convoy makes the destroyer's response to our attack all the more difficult because of the freighters all around us. The air on the bridge is stifling now that the pressure doors in the bulkheads have been sealed for the attack. I have a splitting headache.

First Officer Dewey has to wipe sweat from his forehead with his shirt sleeve as he reports that we are ready to commence the offensive.

"Right," says the Boss. "Torpedoes – lock targets. Two patterns of eight. On my mark. Ready Chief?"

The Chief is standing by her console, her hand poised over the controls at the engineering station. AI readouts confirm the optimum kill patterns.

"Display code red!"

"Code red, aye, Sir"

The Boss is hunched forward over the tactical display.

"De-cloak!" The pattern of sound coming from under the floor panels lowers in tone. "Pattern one, away!" The ship shudders. "Pattern two, away!"

It's like being at sea in a small dinghy in a heavy swell

"Deep-scan!"

A pulse of sound bounces off the outer field.

"CLOAK!"

The background hum rises half an octave

"Damn you, Dewey, get us out of here!"

The G-dampers are on full, but we are all slammed to port as the ship starts to corkscrew, picking up speed as the field generator screams and creates extreme measures of field energy, hauling us down into the vortex on multiple AI deduced evasives.

*

Disorientation. The world around me becomes a riot of red lights, flashing

crystal displays, alarms and shouts. It takes a few seconds for me to realise that I'm holding my breath. I'm staring at the hive of activity on the bridge with my mouth open, catching flies. In the moment that it took to fire our torpedoes, the crews on the destroyers stared at their displays in disbelief, then hauled themselves back into the well-worn groove of military procedure as their own AIs begin automated defensive responses. Our deep-scan, which confirms the kills, triggered automatic return firing patterns, which, with our own torpedoes, are ripping the convoy to shreds. Even though we have energy shields and cloaking, even though we're bending the carcass of our dear old girl in two in an attempt to magic ourselves away from the slaughter, we can feel shock waves breaking over our hull as ships explode and as lives cease. Our cocoon is compressed to hell and back, again and again. It feels like the heavens have split apart, and I grab hold of Dewey, unable to speak, looking wildly up into his eyes, but he shrugs me off.

"Evasive seven! Counter-measures! Where are the fucking counter-measures?"

The Boss is sitting in the command chair, gripping its arms so tightly that the blood has drained from his knuckles. He looks as though he is straining to hear the destroyers through layers of bucking metal and squalling energy.

The Chief is hitting one of the control consoles on the engineering panel and yelling over the communications link to the control room. "Get a diagnostic on counter-measures right now!"

The Boss whistles sharply, cutting through the noise, and holding up his pale left hand, he whispers, "Quiet, people, quiet. How's the cloak, Chief?"

She slams her hand onto the counter-measures console. "Cloak is A-one. Fucking shite counter-measures. Offline completely."

"Okay, Dewey, evasive three and bring us to port two-nine-zero, relative level, ahead slow, mark zero-zero-one."

There is a momentary sparkle on the main AI tactical display as the ship's computers assess and then confirm the validity of this unexpected change in evasive approach. Dewey repeats the order and instructs the helm. I can feel the ship gliding, softening, slowing under my feet. A moment of calm after the storm. How far out are we? I begin to relax, and turn to Dewey to ask if it's always this easy and then all hell breaks loose once again.

Broad pattern energy bursts. The enemy can't see us, can't scan us directly, but they can employ broad sweeps of high intensity energy fields using any one of multiple, coordinated offensive programs, programs designed to give them an optimum chance of finding us. The destroyers work as a team, creating vast cubes of space within which they basically irradiate everything. The energy bursts are modulated so that we have little or no time to tune our cloak to their

diffusion patterns as they wash over our position. The net effect is that if the energy burst interacts with our cloak we get lit-up like a fairy light on a Christmas tree. For good measure, each and every energy burst is accompanied by a sweep of proximity warheads.

Dewey, that good-looking asshole with the permanent Louisiana grin plastered across his face is suddenly looking like death. He is holding onto the bulkhead by the navigation station and asks me whether I have been recording everything.

“Yeah, never stopped,” I reply. “Pictures, sound, you name it, it’s all down.”

He nods once, smiles and says, “Hold on tight. The Boss is going to fool them. They’re expecting us to run, so we’ll hold here, let them blast at nothing and then sneak out.”

The air seems to fizz and crackle. I hear what seems like someone knocking on a pipe in another room, except the knocking is getting louder.

The Boss is standing now. “Scheiße! Brace for impact!”

The knocking sound is starting to echo, then to boom, and the ship starts to rock. My bowels are suddenly full to bursting and burning me with violent cramps. A dull thud. A second later and the shock wave hits. The shield absorbs the impact but the ship is pushed back, throwing bodies across the floor. My feet slip out from under me and I grab at the wall, catching hold of a power conduit to prevent myself flying into the Captain’s chair. Sirens wail. My eyewear slips and falls from my face. As I grope forward to try and retrieve the device, the ship’s lights flicker on and off repeatedly. The Boss crabs forward to the helm and crouches down by the helmsman. There are groans coming from the weapons operator. I can just hear the Boss as he gives orders.

“Ahead three, vertical seven, evasive nine. On my mark...”

I swear that he can hear the bastards, that he can read their minds. The evasive pattern is designed to slide us underneath the sweep of energy bursts with a sudden surge towards maximum velocity thrown in for good measure. Another thud and the ship keels to port, violently. Sparks and smoke fill our red shadowed world. People are crashing around the room. Strobe effects. You want to run but there’s nowhere to go. You want to pray. You want proof that bastard God exists. You suddenly and desperately search for the miracle, but all you get is a mouthful of acidic smoke and smarting eyes. I think of my mother and try to force my thoughts all the way back to her in New Shanghai, but nothing escapes the thin metal walls of our glory ship.

The Chief is calling for damage reports from the aft sections. Another alarm starts to sound. The Boss looks around and the Chief shakes her head.

The Boss turns back to the helm and speaks calmly to the helmsman. “Starboard two-twenty, negative vertical one-thirty. Hold it... hold it, ahead three.

Remember, on my mark give it all she's..."

Transcript: Class. Secret – Command Level 2 – Hive. Archive.

FleetCom Ref: K47 / Zhou (Lt) M. 33848-223PC-43

Tag: 2712-03-17 Standard: 13:45 Gaia Command

Vector: 14456-23879

General Note: Salvaged Recorder – Vis. Imp., Snd. Deg, P.File

Status: All Hands - M.I.A - N.F.A.

Media: Gen Release – Audio only

Authent: 35% Device. 12% Redacted. 53% Creative



Arkland

(A Covenanter Story)

COASTAL DRIFTS – A SOUNDTRACK for a life of serious endeavour. A world bound by the languid curl of surf wrapped in the thin blanket of an early autumn night, surf rolling across sand and pebble and rocky pools, driven by a sliver of moon and a light but persistent breeze. A chill in the small hours heralding the winter yet to come. A cloud covered night, the darkness almost absolute in the absence of coastal lights and curtained windows and headlight reflections. Waves ventured landwards, waited a moment, as if checking to see how much higher they could still rise, and then drew back in a noisy scurry, with just a hint of white foam visible under the sleeping sky to mark their steady, invasive progress.

A broken coastline; broken by cliffs and rock falls and the half-submerged remains of the lost, landward foundations of a saturated and submerged society. Thirty metres of sea-rise on this exposed southern coast. A landscape desolate now, dark and pitted with craters. Even so blighted, it was still a relative place of safety compared to other, gentler inclines, where waters and boots and ‘fugee terrors still washed ashore on a tidal heartbeat. In this sector, the southern slopes comprised washed limestone and sandstone bridges. A mixture of tangled beaches, small bays and narrow inlets beneath towering avalanche layers of mudstone and shale, lifted and buckled by the colliding worlds of Pangaea and Laurasia three hundred and twenty million years previously. This was a place once beloved of retiring gentle folk, but was now a last sentinel post for the superannuated soldiers of The Covenant.

To be precise, according to a satellite fed, tactical geolocation display perched on

an overturned plastic beer bottle crate, these were the ruins inland of drowned Weymouth. These badlands were the last sentinel post for Jack Hunter, a latter-day limitanei, a veteran and now semi-retired sergeant in the Covenant Defence Force. Weymouth was a generally quiet sector. A ghost land. A shallow puddle, adrift with scraps and fragments of former worlds. A shoreline knee deep in plastic bags and refuse. A shoreline suffused with blood and bone and so many forgotten 'fugee remnants. A shore line littered with bricks and concrete and rebar palisades. Jack Hunter was fifty-two years old. He was now two years into a five-year stint as a Covenant reservist. An old soldier; a time-served mucker on light duties now that he was declining in his material faculties. Jack Hunter was a battle scarred Centurion born of this archipelago, this new way of being, awaiting his pension and his next, hard-earned step up The Covenant's ladder of slippery privilege.

These lengthening autumnal nights, with the breeze whipping in off of the Channel, driving spikes of arthritic pain into his joints, were easily as hard to bear as any that he had known when younger. Jack had spent years in dugouts like this, surrounded by the cobbled, sandbagged and bandaged technology that The Covenant used to keep at bay the ravaging hordes from across the bloody seas. Back in the day, when he was still vital, when he commanded the elite legions, time passed quickly by dint of order and action. A soldier always had too much time to think, too much time for the cold to seep into his head as well as the fabric of bone and cartilage and tendon, but these days of inaction in literal backwaters seemed worse. Jack shrugged the sense of frustration off. He was hardly alone in contemplating the things that he had done and the things that he had seen and wished he never had.

These mental stresses and physical disorders were commonplace. The Covenant hinterland bristled with the spikes and the curses of the battle-scarred. Jack blasphemed against the night darks and that slight breeze that somehow found every gap and slit and hole in the dugout camouflages. He reached for a flask set beside the satellite display and shook it. Cold and empty.

"Fucking hell!" It was three o'clock on a brisk autumn morning and he was scanning a dark and forgotten corner of the new coastal chaos. Four hours until watch change. "Fucking bone!"

Jack closed his eyes, breathed in deeply and switched off, reverting to automaton mode. He sat in a dark, muddy hole in the ground surrounded by patched up tech – scanning monitors, infrareds, motion sensors, flying eyes, night vision, early warning – all of it sitting smugly blank, as if taunting the old man, saying, 'We don't feel the cold, Jack. We don't need to pee on our boots in the dark, Jack. We don't count the wasted minutes of a dwindling life...'

Jack opened his eyes wide and forced a yawn. Stimulation. Time to snap out of

the three-a.m. jitters. He double-checked the equipment. A status screen for each combat effect sat mounted above a target plotter and the main ops controller. Dragonflies: air drones with light arms and medium cluster ordnance types; Orcas: sea drones sporting an array of micro-torpedoes, bomblets and erratic, waterproofed machine guns; Grizzlies: auto-killer gun emplacements lining the shore with their autonomous motion detectors and their extreme prejudice, so long as the ammunition lasted; Scorps: autonomous mobiles, each one sporting twin machine guns, sniper ordnance and grenade launchers. Behind the dugout there was an array of automated mortars covering Jack's sector. As a final line of defence Jack patted the stock of his automatic carbine. He felt the weight of his combat pack full of taped together magazines. Snug.

Systems all reading in the green. Jack could sit here, one man buried in the sand, and launch the equivalent fire-power of a combined arms regiment at any 'fugee desperate and stupid enough to try and sneak into this Covenant Arkland. Jack logged the emptiness and the silence dutifully on his wrist pad. This was how they protected the Ark. Hard and brutal and necessary. He was getting long in the tooth, that was certainly true, but he was an expert sector commander. When questioned by the kids and the folks back home, as he did the dutiful rounds of communes and schools, he always said publicly that he still got a pretty fundamental kick out of protecting something so special. Except that Jack no longer felt quite so certain about that feeling of satisfaction that should come with a job well done. He could rationalise. He frequently did with the cadets that they sent him, the youngsters destined to switch from apprentice-mode killer to the full-blown berserker.

Jack's sector backup on this watch was a young girl from the Elmet Collective, far to the north of these southern coastal wastelands. Janet Mustafi. Not so sweet-sixteen; a volunteer squaddie. One metre sixty-two of rapidly emerging, gym- and steroid-enhanced brawn under a puppyish mop of blonde, scraped-back hair. She still sported childish full cheeks full of rosy charm, but Janet also had coal black eyes that sparkled when she stripped down and cleaned her personal firearm. She was Covenant all right, and brimming with teenage confidence and certainty, just like Jack had been, back in the day.

Ten minutes until check-in. Ten minutes until the inevitable text tirade from Janet. Standard operating procedures. Squads on watch checked in with each other just before the hour. A five-minute window in which the youngster invariably exercised her texting fingers and thumbs on her personal cell. Unofficial. Unapproved. Hackable. Jack carried a cell too. Everyone did. Jack used his single digit lack of dexterity as a way of throttling back the conversation. The Zobs back in the headshed turned a blind eye, so long as you didn't abuse the situation. Ten minutes to rehearse the conversation. Ten minutes to mentally rehash Covenant mantras and catechisms before the latest batch of

insufferable teenage gobshite.

*

The official protocols. Earpiece and mic linked via wrist-pad. Embedded subcutaneous military issue transponders. The itch in his wrist. A faint hiss of static as the earpiece popped into life. Jack Hunter initiated the check.

“Hunter Four Four. This is Hunter Four Four. Radio check, over.”

“Hunter Four Four, this is Juliet Mike Five Niner. Loud and clear. Five by five, over.”

“Hunter Four Four, copy. Request Watch Station Beta sit-rep, over.”

“Watch Station Beta. Sit-rep: all clear landward. All clear mobile. All clear aerial. All clear seaward. Way too much zero-dark-thirty, Bossman. Over.”

Hunter caught a stifled laugh just before Janet Mustafi lifted her finger off the send icon on her wrist-pad. Bloody kids.

“Juliet Mike Five Niner. Concentrate and cut the crap. Stay frosty. Hunter, out.”

Telemetry readouts on his screens confirmed Five Niner’s manual observations. He killed the connection just in time to feel his cell vibrate in his shirt pocket. Old school. Patched into a sub-carrier on the military circuit. Texting time.

‘Hey Bossman.’

Bloody kids. No respect. He half-smiled in the darkness. He liked Janet. She wasn’t wired properly yet, but she had more balls than most of her male cadet colleagues. He waited for the next instalment.

‘Tell me ag. Why we freeeeeeezing butts out here? No dice. No game. I ken nuthin smiler. All bone...’

Slow fingers. Cold joints wrapped in thin cut-off woollen gloves. Single digit messaging.

‘Orders, girlie, orders. We do wot Ruperts say coz we r good boys n girls. Eyes peeled. Not in mood for nuvva hist less.’

A moment staring at the display. Basic icons. Most of them redundant. Email. A music app but he had nothing to upload out here. Major mistake. Camera. Disabled. Calendar to count down the days on shift. A clock. Likewise the minutes. A health app. Funny. Weather. Even fucking funnier. Calls. There hadn’t been a working public cell network in decades. But still they made the phones and the kids patched them into sub-carriers and redundant loops on government networks. Just like he had done way back. Just like he still did.

The screen dimmed. Another second or two passed. The screen lit up and Hunter’s cell vibrated once again.

‘Shirt on Bossman. Got any new jokes?????????’

‘Yeah – u hear about the teenage girl who shut the fuck up?????????’

‘OOOOOOHHHHHHHH! Scary. Who gonna come around here????? You????? And whose army????? AHAHAH xxx’

A sound. A single wail. A synthesised ghost trail. The faintest flicker on a needle dial. A screen waking. Readouts. A wide-eyed moment in time. Then flatlines. A gull, perhaps? Another tech glitch? Hunter waited for confirmation. Nothing. Silence. The breeze tugging vainly on the camouflage. Feeling the cold ache in his bones, he shifted, sitting up and hitting active scan controls. Everything reading in the green. A second flash and a half-smoked vapour trail across the monitored horizon. Fingers suddenly warm and fast forward.

‘You got anything up there? Left flank? Just a slight...’ Before Hunter finished typing out the message his cell vibrated in his fingers.

‘Flash. Burton Island. Inside Portland ring. Point beyond Chickerell landings. Single burst. No intel on top scans. Birds?’

‘Hold.’

Hunter killed the cell and opened up main ops comms.

“Hunter Four Four. This is Hunter Four Four. Attention, Bincombe Down. Request scan drone. Portland Ring. This is Hunter Four Four. Attention, Bincombe Down. Request scan drone. Portland Ring, over.”

Static. Vital seconds. Screens blank but brooding. Hunter could feel his pulse rate rising. He felt a heaviness bite across his chest. His eyes were turning to grit. He wiped his hand across them. Hard. A break in the static.

“Hunter Four Four. This is Bincombe Down. Roger that.

Telemetry correlation. ETA three minutes. Activate counter-measures. Repeat. Activate counter-measures, over.”

“Bincombe Down. This is Hunter Four Four. Roger that. Over and out.”

One of the local command sub-frequencies lit up an icon. Incoming. Hunter flicked his wrist-pad screen to the right to connect. As he listened, Hunter was already spinning up controllers and pulling up the battlefield holo-projection.

“Hunter Four Four, this is Juliet Mike Five Niner. Loud and clear. Copy that too. Activate counter-measures, over.”

Hunter patched in his full combat link to Janet Mustafi. Auto-send and receive.

“We’re off main grid, Five Niner. Combat comms only. Combat ready. Keep talking, girl, keep talking. Eyes and ears. Putting up local Dragonflies. Orcas one through four in the water. Grizzlies activated. Scorp One heading to Chickerell

sector. Make sure your transponder is A-OK. Repeat Transponder check. No collateral, please.”

Janet was, all of a sudden, chillingly well behaved. “Copy, Hunter. All in the green. Eyes open. Sats online. Sensors online. Feeds five by five. You should be seeing what I see. Big fat nothings.”

“Copy that, Five Niner. Affirmative. Seeing... nothing... yet... over.”

Hunter double- and triple-checked his screens. A big, fat zilch. Probably another false positive. He and Janet would have to spend a god-awful hour post shift cleaning the Orcas. But he decided that he should not grumble. He focused on the here and now, all the while playing out a series of subliminal images in his mind’s eye. These moments, these periods of intense, nervous preparation always made him think back on the world as it once was. As a child, he remembered the walls going up. The oceans were already substantially higher even then, and driving a terrorised and despondent humanity ever onwards across the land and the sea. Waves of Middle Eastern and African ‘fugee catastrophes overwhelmed the Mediterranean and then the Balkans. Spain and Italy disintegrated. The Swiss were the first to proclaim Ark status and slam shut their doors. The continental north held on precariously.

Hunter remembered city streets crumbling as people hurled up barricades to protect their own kind, barricades behind which they starved and dehydrated. Water was the worst of it. Ironical. A city, a town, gone to hell in a few days when the water stopped flowing. Ghettos and warlords and burned out shells. Although he couldn't have been any more than four or five years old, Jack Hunter remembered being dragged by his father to a compound, his young body covered in dust and the smell of burning rubber. A Covenant camp; a place of safety. Hunter was vaguely aware of the older religions. It was a time of blood and sweat and suffering. The Covenant tendency was decidedly collective in outlook. He thanked his Gods for that. His father had died within the year. Hunter was co-opted as a military orphan. His life was ordained.

By the time Hunter was sixteen, the same age as Janet Mustafi was now, he was fully committed, convinced that The Covenant and their collective technology bias was the only way. They followed the Swiss example. They too built walls around more and more of the old archipelago, forcing those less ferocious or less capable than themselves back into the seas. Water wars. Hell on earth. Coasts or ghettos. Drone and Grizzly. Occupying high-rise burn-outs to create fields of angry fire. Salvation came with belief in the collective will. Freedom of action, freedom of thought, warlordism... none of it mattered. You believed or you died. The Covenant was a form of radical surgery on a massively diseased societal body.

Covenant tenets and justifications. Hunter had seen the fires burning on London

shores. He had smelled charred flesh and practised his sniping skills on the floating, bloated corpses that drifted in the rubble and wire and mud-laced margins of the Inner Thames Lagoon. He never saw their faces in his dreams, just the backs of their heads. He shuddered. He had been there as wave after wave of boat people were buried at sea. The natural inhabitants of the archipelago had nearly lost everything. It was total war. Total commitment. But here they were, still at it, and Jack Hunter was growing old and tired. His conviction was starting to fray at the edges.

He shook himself back to the here and now. *“Back to it, Jack, back to it right now. You’re Covenant, Jack. You’re an apparatchik, a missionary, a believer. We believe in the collective. I believe in the collective,”* he whispered to no one and to the dim night, pulling the combined views of four Orcas up on his main control holo.

*

Orcas hunted in packs, whether made of flesh and bone or metal and software. Orca One. Right flank. Ahead of Two and Three. In line with Four. Casting a net. Software systems monitoring shapes and heat signatures. If it looked like a boat but had no transponder signal – effect maximum prejudicial resolution. If it looked like a human being but had no transponder signal – effect maximum prejudicial resolution. If it was unrecognised and failed to respond to the briefest of transponder challenges – effect maximum prejudicial resolution. The machines were simple in their *modus operandi*. Circle. Drive the kill into a tight shoal. Effect maximum prejudicial resolution.

In the shallow waters above old Weymouth, in the sounds between Portland island and the waterlogged rump of the higher old town, now called Burton Island, the Orca pack spread wider and thinner. Between them the effective kill pool was already diffusing alarmingly. On the surface, bobbing and weaving and crashing and shouting, wave after wave of small boats, dirigibles and rafts with converted vehicle engines swarmed and smashed and toppled on the wave-roll. The air was full of clashing light arms fire. The Orcas were the main target, but the frantic revving of outboards and the chopping swirls of current meant that all fire was unfriendly. The ‘fugees were killing each other as randomly as they aimed at the surging Orcas. The air was filling with exhaust smoke and cordite clouds and wild surges of spray and wave top.

Each Orca was equipped with basic video, a tight beam sensor array and pretty fair infrareds, so the crud clouds posed little immediate difficulty in themselves. The sheer width and depth of the incursion was, however, already beyond critical. As Hunter watched his readouts, telemetry and ops screens, he began to realise that this was something more than just another off-load of half-starved wretches in a few leaky row-boats. He had red lights flashing on every Orca

monitor. Audible alarms. The Orcas were too far apart. They were isolated. Hunter watched as mini-torpedoes launched, smashing into boat after boat and launching metal and wood and skin and bone and blood in fountain bursts among the spray, but for every boat taken out, an exponential number seemed to emerge from the darks just beyond the curling surf tops. One by one the sheer weight of bullets fired at Hunter's sea drones, no matter how inaccurate, were taking a decidedly heavy toll.

Orca One, out on the right flank, found a volume of clear water and swung to port, back towards the target zones. Infrareds were stronger there. Machine comms. Orca Three dropped off the network. Orca Four was showing erratic vectors. Orca One picked up a sudden graphic from one of the onboard cameras. Black and silent. Looming above the drone. Unidentified. Orca One was out of heavy ordnance. Orca One turned head on and loosed what was left of its machine-gun ammunition in the general direction of the intruder. The machine-gun jammed. Alarm signals. Telemetry. Orca One dropped off Hunter's live feed.

"You seeing this, Five Niner?" he shouted into his comms mic, adrenaline and astonishment flowing equally freely. "Sit-rep. How wide? Losing the water. Repeat. Losing the water, over."

A moment of silence. A half heard whisper. "Shi...t"

Protocols. Drills and disciplines. "This is Hunter Four Four. Juliet Mike Five Niner. Situation report, over."

"Yeah. This is Five Niner. Copy. It's carnage. Whole of our shoreline. Deep waves. Boats out beyond sight lines. Sky lighting up way out on the right flank. Dragonflies dropping. Nine operational out of total complement. Six... make that seven casualties. Correlation, over?"

"Stay with me, Five Niner. I can see what you see. Dragonflies expending full payloads. Getting picked off on return to base. Shit. We've got more incoming. This is way heavier than the usual random 'fugee paddle. This is a friggin' invasion..."

Decisions. Immediate priorities. "Pull everything back off the water, Five Niner. Shoreline perimeter. All Grizzlies and Scorps on full autonomy. Calling in Heavy Brigade. Heads down, over."

"This is Juliet Five Niner..." Cuts in the static. Breaking words. "... Give 'em..."

Switching frequencies. Code words. "Hunter Four Four. This is Hunter Four Four. Copy Bincombe Down. Balaclava. Repeat. Balaclava, over."

Confusion on screens. Wild thoughts. Cutting through the mental chaos. All four Orcas down. Remaining Dragonflies en route to or from re-arming. Heavy static. Vital seconds. Scorps brooding in the shadows. Grizzlies bristling. Waiting.

Locked. Loaded.

“Hunter Four Four. This is Bincombe Down. Copy that. Heavy Brigade previously engaged. We’ve got a ten-mile situation, Hunter Four Four. Hostile Storm. Repeat Hostile Storm. Hold position *AD UNDAS*. Repeat, hold position *AD UNDAS*. Bincombe Down, over and out.”

“Jesus H...” Hunter tried to think clearly. Training. Drills. “*Just do it, man.*”

Hunter swiped the control screen far left and called up the master systems console. He opened combat comms.

“This is Hunter Four Four. Juliet Mike Five Niner. Switching to full battlefield autonomy. Systems operating without licence. Repeat. Systems operating without licence. Five... Four... Three... Two... One... Live. Repeat. Live. Over.”

“This is Five Niner. Copy that. Over.”

“Chickerell forward position, Juliet. Full combats. Transponder and kit on full boost. See you in ten. Over and out”

*

Dawn was still an hour away. Janet Mustafi walked the shoreline along the Chickerell landings. She checked the transponder signal strength on her wrist pad repeatedly as she walked on, dipping in and out of scorched mortar craters. Burnt out Grizzlies lined the immediate foreshore. She could see the tell-tale signature lights on sniper units set on landward buildings. She could sense the far-off click of firing pins hitting empty breeches as some of the machines tried to carry out their prime directives regardless of transponder signals. Burned out boats and rafts littered the surf.

Janet was suffering from a fatigue and horror-laced cocktail that made her quite forget how numbers worked. She saw but could not make any sense of the bodies bleeding out on the mud and sand. The shoreline bobbed and twisted in human form. Jagged splinters of wood driven into the sand stood as markers for the fallen. Wood and fibreglass and rubber danced with St Vitus atop the bloody waves. Janet ducked involuntarily as an outboard fuel tank exploded further down along the shoreline. She was immediately thrust back in her mind’s eye to the forward dugout and the thick ‘crump’ of mortars firing and shells bursting in the surf. She could hear the incessant clatter of the Grizzlies and Scorps as they hit out at anything moving on the beach without a transponder signal.

The ‘fugee invasion had hit hard but was too low tech. Numbers alone might get them through the first lines of defence, but heavier fire-power and better telemetry won out. Jack and Janet had added their own crazy weight to the sound and the fury, pumping shotgun shells and carbine fire into the smoke haze in their sector. Janet had registered the odd kicking of dirt and sand as stray ‘fugee

bullets ripped at the ground around them, but the awful weight of death was almost totally one-sided once the boats started to hit the shallows.

To cap the night off, the Heavies had charged in after an hour or so of wave-top mutilation, just in time to blast the land and the sky to shreds. She and Jack were caught out in the open. They had hit the ground and dug themselves in as hard and as fast as they could, but clusters and fire sheets did not respond to transponders. They were as much meat for war's grinder as any 'fugee invader. That was the sheer bloody mess of it all. That was why Janet was walking the shoreline alone now with her young teenage heart shot to pieces. She walked on, incapable of hearing the cries and the moans of the wounded. Behind her, one of the remaining Scorps rattled across the ground, trailing one of its many all-terrain wheels from a shattered rear axle.

Janet Mustafi cried to herself as she walked the landings. In her left hand she carried Jack Hunter's regulation sidearm. In her right hand she held a blood-black rag. Overhead the last of the Heavy Brigade drones were swooping in to finish off the seaward stragglers out in the deep-water sounds. Janet preferred not to look. She turned her head away from the shoreline and started to head back towards the forward dugout. Mop-up squads were starting to appear, men and women in twos and threes, methodically terminating the wounded or picking up pieces of shattered and broken military kit. Janet barely registered their presence. She just wanted to sit with Jack. She wanted to hold his hand. She wanted to hear him tell her that everything would work out. She wanted...

It was hard to see the terrain clearly through her tears. Janet stumbled repeatedly, dropping the bloody rag more than once, but she scrambled and scratched and kept that scrap of soiled material as close as she could. The craters were less densely ploughed as she made her way towards the shore's hinterland. She floundered and scabbed back across the rubble and into the first ramparts along the building line. Janet wiped the grime away from her face with the back of her pistol hand. She finally registered silhouettes against mobile lighting. Armed figures. A shore patrol. Final mop-up.

Janet remembered her protocols and signalled, pointing to the sector's forward dugout. That was where Jack was waiting for her. She would hang out there for a while, away from the slowly emerging day and away from the all too visible horrors of her first 'fugee battle. Out of sight. Safely tucked away with the machines and the flashing lights and Jack Hunter.

Reaching the forward dugout, Janet swung a length of camouflage netting and tarpaulin up to chest height, bent double and stepped into the darkness. Glowing screens gave off an eerie green light, made softer by the dull yellow wash from a camping light hanging from the dugout's centre pole. It took a moment for Janet to adjust. She saw Jack sitting up, resting his back against an equipment case. He

looked odd, as though he were two people merged into one. Only slowly did Janet realise that the otherness had eyes and that those eyes stared back at her. And there was something else. Janet stopped dead in her tracks, pistol raised. She heard a creature mewling softly, followed by a panicked shushing sound. Jack, meanwhile, sat quite impassively, eyes closed, as if exhausted and sleeping off the night's excesses.

Janet breathed quickly. A 'fugee. A woman. A 'fugee with a bloody child in her arms. A 'fugee holding a knife that she had been using to dig into Jack's wrist to find his transponder just before Janet walked into the dugout.

"Fuck..." was all that Janet managed to say. She caught her breath for a moment, trying to hold the pistol firmly in front of her. She hoped that she had left the safety off. She made a conscious effort to slow her racing heart. She should just waste the hostile and be done with the bloody night. She should defend the Ark. Janet watched, uncomprehending, as the woman stopped digging into Jack's arm, placed the knife gently on his legs, and then reached down beside him and offered up a new-born in old rags and oilcloth.

A voice thick with salt and sand and loss. "You take... please... you take my baby..."

The woman stared straight into the gun barrel. She was barely older than Janet, but her eyes spoke of years of suffering. She was a camp girl. The Gods alone knew what price she had paid to make that crossing with the child. Janet could see those time-worn newscasts in the Collective's common rooms, newscasts designed to show the horrors of sub-humanity and put steel into raw recruits like her. She almost pulled the trigger as a reflex reaction.

At that moment she felt a cold draught of air and the faintest change in the ambient light coming from behind her position in the dugout. The flap lifted. A head. Shoulders. A young squaddie stepping in beside Janet and standing up straight, automatic carbine hanging in the crook of his right arm. He took another step into the room and raised his weapon. Out on the beach Janet could hear the odd crack of gunfire as the mop-up teams did their job.

"Holy fuck..." The young squaddie was laughing as he turned to look at Janet, saying as he did so, "Bugger me, Janet, you've only gone and..."

As the young squaddie turned towards Janet she made a decision. A single shot. A moment of silence broken by the muffled cries of a baby whose mother had buried the child deep in her bosom. On this night of nights, one more gunshot would hardly be noticed. Janet rationalised the moment. A life for a life. A life for Jack Hunter.



Bootneck

(Hamid's Story)

“Drink and the devil had done for the rest...”

THIS SOLITARY SINGER'S VOICE was weak and thin, a thrice-boiled gruel of a voice, a strangled murmur rather than a robust, wave-tossed, working-Jack's shanty. These particular cubic metres of vacuum were lightly filled with softly muttered words riding on sour crests of warm breath within the confines of a blacked-out, domed and device-encrusted helmet. Hamid Ashvaka, Sergeant of Marines, breathed heavily as he fought back waves of nausea. Even with the suit's gel-form encasing his fragile limbs, the shearing forces unleashed upon him by sudden, explosive acceleration were still making his mind and his stomach turn somersaults. He felt deeply bruised on his right hand side. He could feel blood and mucus drying on his chin and cheeks. He could not wipe the tightening crust away from his helmet-encased head. His hands were thickly gloved.

He knew, through years of training and conditioning, that he was, at least for now, perfectly safe, but the basic mammalian animus, that survival instinct rooted deep in the hippocampus, kicked-in savagely nonetheless. Hamid felt as though the crushing forces unleashed by extreme thrust reacting with his own dumb inertia must inevitably have cleaved his body in two, and that what he saw through his helmet screen was a final residual memory of the whole man. He felt the catheter in his arm sting momentarily and he felt his heart rate slow. The onboard AI was managing his panic levels, dropping a little something calming into his veins. It would not do to start ripping at the fabric of this universally miniscule little world that he inhabited. He felt a surge of relief and the throbbing at his temples started to subside. The truth was, he knew, that his legs

and ribs would be fine. His momentary terror, a terror that had threatened to cascade through his head like a raging, white-water flood, would no longer stop his aching heart.

“Yo ho ho and a bottle of rum...”

A technique for survival, Hamid had sung this same song to himself through countless exercises and drills. He could not remember where he had first heard the bloody little ditty, but he found the song helped to clear his mind and focus his thoughts on interacting with the suit’s personalised AI so that they both might endure. He had sung it for real once before, out on a shattered orbital, out where the wild things grew, and here he was, alive and still kicking, and singing the damned song once again.

“We wrapped 'em all in a mains'l tight...”

Hamid heard rather than sang this last line of the ancient, Earth-centric and salt-laced sea shanty. The line was sung directly by a synthetic voice with perfect pitch and fashioned harmony, androgynous, almost female. Unlike Hamid’s rough, slightly Arabic lilt, the surround-sound avatar delivered the line with a quietly subtle but nonetheless distinct Old-Anglo piratical burr.

Silence followed. The sound of slowing breath. Hamid’s heart rate continued to drop. He watched the numbers scroll top to bottom down the head-up display currently running on his blacked-out visor. Numbers. Velocity. Coordinates. A wire-frame visual. Systems running A-One. Five-by-Five. A perfect visual representation of life in asymmetrical constructs. And beyond the spectral confines of this miniature digital concert hall, Hamid could just make out the dull crump of localised nano-warheads. The suit was clearing a path for them both through a debris field, debris that was almost certainly all that was left of the ships assigned to protect the sector’s ComSat network. Hamid was a member of the ‘Forlorn Hope’ suicide company, left behind to make life difficult for an already victorious enemy. Hamid volunteered. He always did. He was sort of screwed together that way.

Everything familiar was gone now. He had watched it all unfold on the ComSat’s visual sims. He was one of an away team of three volunteers acting as a final line of defence on one of the last of the principal military network way-stations in the sector. There were no other life signs on his screen. Hamid felt a terrible sense of solitude. He knew instinctively that he was utterly alone, but there was still something appalling and disheartening about the bare stats. There was no evidence of life external to his own. There was none of the usual humanoid chatter on the visor. All he saw was the number of a solitary beast in the void, just his own tumbling red dot on the wire-frame visual surrounded by cold blue icons representing pieces of hull and superstructure and jagged shrapnel.

“Are you still singing our song, Sir?” There was a definite bias towards the

female of the AI species. The suit spoke softly, almost whispering, its concern for Hamid's mental wellbeing evident in subtle undertones.

Hamid continued to stare at the head-up display for long minutes, maintaining internal silence, before closing his eyes and letting out one last, long despairing breath.

"I've told you before. Cut the fucking affectations, Suit. You are a machine. You keep me alive. That's all. I don't want a relationship. How many more..."

"Yes, Sir. It's only that under these particular circumstances, I thought..."

"CUT THE CRAP... and don't ever talk over me. You know how I feel... Look, Suit, I know... we both know what we are. I don't like any of that anthropomorphic shit. I like skin and bone and itchy trigger fingers... and what makes matters infinitely worse is the fact that you've got your metaphorical finger on the trigger... we both know how this one ends..."

Silence. Hamid wondered whether Suit's empathy algorithms had somehow been switched back on. He hoped not. It had taken a lot of booze and smoke rations over a good few months to bribe one of the techs to get that stuff deactivated. Hamid did not want to waste his final few hours tending to the needs of an emotionally fragile life support machine. Except, of course, he knew that it went deeper than that.

Every Marine had a suit. You picked one up from stores along with your boots, your basic kit and your pulse carbine when you graduated from basic training, and that suit stayed with you pretty much for life, at least for the life of either the suit or the man, and in most cases those terminations coincided. Each survival suit was augmented and adapted by its owner. You tweaked them, you hacked the software, adapted the personalisation settings to your own psyche, and then you went out to kill or be killed. Every suit had its own fusion micro-reactor for internal power. Every suit had its mind embedded in the fabric and the weave of carbon and composite. Your suit kept you alive when none of your comrades could, or would. Every barracks and troop transport in the inner systems sported tall tales of men who tuned so far into their AI that they started doing really weird shit together. You heard tales... on-board med cocktails and blitzed-up freak-show gymnastics parties. That was the thing. Hamid had never allowed his relationship with Suit to get personal. He had always figured it as a business relationship... until now, perhaps.

"With twice ten turns of a hawser's bight..."

The song of the ocean grave emerged once again, playing that same diffusive role. Hamid did not want to think about what was happening around him now. He would sing and through the power of rough melody, spliced with a little modern grog, he would do his best to control his fear. He felt slight tugs against

his skin as the suit used micro-thrusters to manoeuvre them both through the debris field and out into clear space.

That was, of course, precisely the problem. He was floating in the void, cocooned and bubble-wrapped in his survival suit, adrift upon a solar wind, being slowly skinned by cosmic radiation that would, in short enough time, degrade both the man and the suit beyond the viable. He expected to die long before then. He could, if he so wished, issue a final command that would set in motion a moment of bliss before the drugs stopped his heart and Suit initiated its own terminal self-destruct sequence.

And that posed another fundamental problem; the thorny question of man-machine trust. How could Hamid be absolutely sure that Suit would carry out that final instruction? He was, at the end of another foul and blood-soaked Sol day, just another collection of data, and the prime directive was always to deliver that data intact to TacOps. Humans in the flesh came second in the many lists of things that AIs might consider important. Download and be damned. At least, that's what the more blunt AIs said if ever you bothered to ask them such basic philosophical questions.

Clear space. In the normal run of things that might not be too bad. In any of the usual theatres, with beacons firing and distress calls radiating out from Suit on all standard frequencies, Hamid could expect to be picked up within a few days by one of the mop-up ships. It didn't really matter which side came snooping, because either way he and his friend Suit would be safely bedded down in a med facility. Hot food and drug induced sleep for Hamid. Mutual debriefs. Questions. Conditioning. Maybe a little furlough, even out on the dark side. In the normal run of things. These times were far from normal, though. Hamid mulled things over for a moment or two longer while Suit continued the shanty:

"And we heaved 'em over and out of sight..."

As far as Hamid could tell from the data now scrolling across the head-up display, his was still the only life-sign showing up on near-scan. He was not surprised. The Icehead attack, although expected, had been fast and brutal and utterly beyond any simulation. It was the perfect embodiment of Total War. Hamid's commanders knew that the Iceheads had something novel to deploy against them, something that might change the rules of the game a little, but not like this, not to this extent. The speed and totality of his side's annihilation was truly mind-fucking. They weren't just losing now. The Dirigisme was playing the wrong game entirely. They were still on horseback while the Iceheads rode astride the back of fire-breathing dragons.

There would be no mop-up, not out here, not out on the fringes of the Kuiper Belt, out where the Dirigisme had suddenly become so utterly irrelevant. There could be no rescue. There were no ships left out here. Hamid and his protective

Suit would drift slowly out of scan-sight and he would gently fade out of existence, drugged out of awareness until Suit chose its own way to mark the moment that they both became one with oblivion. Hamid would make one final choice: take the blue pill and set them both on a path to self-destruction, or take the red pill and melt his bones down to water to feed Suit's reactor for as long as possible in the hope that there would be an ultimate download. Chances were that both of them would become cold, hollow husks long before that happened. It all depended on the whim of a thirty-year-old artificial brain with warts and hang-ups all of its own.

*"With a Yo-Heave-Ho! and a fare-you-well
And a sudden plunge in the sullen swell
Ten fathoms deep on the road to Hell..."*

Hamid smiled and closed his eyes. Hell. He liked the sound of the word. Hell... it spoke to him of finality, of a definite ending for a tired man. Hamid thanked the stars that his passing would, however, not be marked and seared by the liquid fires of the vacuum, nor would he disintegrate in the explosive decompression of the naked void. He would just bliss out thinking of Hell, or whatever Suit suggested in those final, impressionable moments of consciousness. That was the moment when Hamid felt a sudden shift in his underlying emotional state.

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A few hours of silent brooding later Hamid finally resumed their conversation.

"Okay, Suit," he said quietly. "No time like the present for a change of heart. Doesn't mean we're engaged or anything, but, for what it's worth, you can call me Hamid from now on." A pause. Silence. No response. "Sit-rep, then, I suppose... and a name. What should I call you? Can't just call you Suit. Quid pro quo..."

"Suit is just fine and dandy. Wouldn't do to change things now, not after all these years, Hamid."

Hamid thought he heard a slight snickering sound in his earpiece. A flutter. He got the joke.

"Yeah. Very funny. I'm just feeling kind of mortal right now: there's a pain in my side, I'm lost in the arse-end of Sol space, everyone's disappeared, presumed roasted – so, you know, I just wanted to hear my name a few more times before I die. Sort of a reminder..."

Suit modulated the tone of its voice, softening, lowering, becoming huskier and warmer.

"Ah, yes... Sit-reps... Well..." A pause, lights fading on the head-up. "You'll be feeling numb between the third and fifth ribs because of the puncture wound in your side. Some damage to your right lung. Nano-meds patching but you will

need a proper medic when we... The puncture wound was caused by shrapnel from the initial ComSat disintegration. Too many objects even for me. I'm sorry, Hamid, but the head-up green lights might have been somewhat misleading. I didn't want you to worry. I'm afraid I'm a little patched up too. Same impact point as your wound. We used a lot of thruster fuel and nano-heads getting out. Twenty per cent fuel extant. Reserve tanks ruptured. Reactor good, thankfully, so internal systems fine, but we've not got a lot left if anything else crops up. Not so much Five-by-Five, I'm afraid. More like Two-by-bugger-all... Forgive the vernacular."

Hamid suddenly felt cold as the low-level but hitherto constant stream of adrenalin that had been suffusing his entire system was finally losing out to the barren fields of Kuiper Belt reality.

Suit continued its report. "You've lost a lot of blood. I'll synthesise as much plasma as I can but it's not a good situation. You'll need to sleep. I think we have a lot less time than three weeks standard. Still running the numbers on that one. My skin integrity is compromised. Radiation. All that sort of stuff. I think this indifferent universe will get us both, man and machine, long before our respective souls are truly ready to depart."

"Souls...?" he wondered out loud. Then Hamid felt a slight sting in his forearm as Suit administered another dose of sedative. The cold dissipated and a dog-day July warmth spread through his veins. He felt his eyelids droop as Suit asked one last question.

"Shall we finish the song together, Hamid?"

In a sympathetically drooling, geriatric union, man and machine slurred their way to quiet, painless oblivion to the tune of: *"Yo ho ho and a bottle of rum."*

Hamid drifted out of time and space, but he felt almost sure that he heard Suit's last words to him: "...Oh, and by the way, Hamid, I have chosen a name. Would you call me Anne – Anne Bonny..."



Angels

(Harmony's Story)

HER NICKNAME WAS BASED on a childhood conceit. Harmony. A way of life for her in the playground and on the streets of Calangute, before the Sprawl finally took away their open spaces and those countless happy opportunities to repeatedly scab knees in dirt and dust. She could still remember the exact shades of brown and beige in her plaid school skirt. Her school blouse, worn only on a Friday, was never white for more than five minutes. A child's life spent running to school along the sandy lanes alongside the shores of the ocean in northern Goa turned the brightest of whites a dull yellow-brown with dust and sweat and crying laughter. She was one of five children, all girls, the progeny of an obdurate geneticist father and a socio-political activist mother.

On the other school days, Harmony wore simple drab tee-shirts, a type of clothing cheap to buy and replace but that could never maintain any purity of colour. The family's dhobi wallah always rolled his eyes when he collected the week's washing on a Monday morning. The women down at the Panjim washing pits complained to him that Harmony's mother, Agnes, had too many dirty children's clothes to launder for the money that they were paid. Some of them even refused the work. The dhobi wallah found the world to be a truly mysterious place, which was something that he also found strangely comforting. His world view was biased towards the cleanliness of linen, and the simple repetition of his daily round proved to him, beyond any doubt, that Gods must exist, no matter how many faces they might possess.

Harmony's full and given name was a hybrid, part Malay in origin with a hint of the Balkan from her mother's matronymic line. They were, as a family, firmly

agnostic, preferring the mix of observable worlds to what their mother called the pure chance of any particular faith. Harmony's father was an empiricist. He believed in field trials and control groups and evidence. Goa must have seemed like a perfect stopping off point in the way-back, when the mystics were turning their gaze heavenwards and the old lands were shifting towards the final days of globalised, science-biased homogeneity. Goa had been a temporary haven for the sciences back when India was driving the world economy. And here, she still was. Elizabeta Ludmilla bin Osman. Otherwise known as Harmony for reasons that she had, as a child, assiduously cultivated.

The conceit in question was a good one, albeit only part of a story. Harmony had been one of those mature girls who seem to step beyond the childish and the gang and pubescent mental malady. She mended quarrels. She saw both sides in youthful arguments and so she mediated in the playground. She was the sort of girl who carried cotton wool swabs in her satchel. Back in the days when her parents still fought their losing battle with the tangled threads of all-pervasive technology and that final dive into Dirigiste social cybernetic immersion, back when kids could still play safely in the dirt, before the brooding walls of climate control had risen up to cover the skies, Harmony had become a favourite older sister. In her playground world, where the rest of her childish co-conspirators managed to balance their physical kiddy sprites with their online, trollish and mass-mutual assassinations, Harmony had found a niche. The mothering niche. Harmony had been the arbiter of last resort, a playground peacekeeper, the nurse who kept the hearse at bay with cotton buds and antiseptic wipes and damp little kisses.

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Well into her eighties now, Harmony could still remember so many of these bright little things from her childhood. Even within the sterile greys and plastic confines of a self-driving taxi, with the distraction provided by all of its remotely flashing dashboard lights and the tumbling urban scenery beyond the vehicle's windows, she could still see clearly and describe in fine detail the fabrics and materials of the coloured shorts worn by the men working those impossible bamboo scaffolds all those decades ago. She could describe the sweat on the men's backs as they manhandled bricks to the latest heights, hand by hand by hand. As a teenage girl she quite clearly remembered sneaking glances at muscled arms and dirty, masculine torsos. The world had been moving rapidly on ahead of them by then, in Goa. Machines made the machines that made the buildings that came prefabricated and connected, but people had still insisted on building with tradition in the subcontinent's deeper social hinterlands. For a while at least. In most cases it was a lifestyle choice. Back then, the universal Dirigiste social paradigm had not penetrated every layer of this now generic human society, not as it seemed to Harmony to do now.

And the street food. Harmony could taste it. Her jaw moved with the muscle memory. She salivated. Pieces of seasonal vegetable fried to a succulent crisp. Chicken in spices. Chatpata vada pav, xacuti gravies, chaats, shawarmas... And Harmony's favourite, the proverbial last supper of the condemned woman, prawn rissóis. She laughed out loud at the thought. Her head filled with a mélange of aroma and spice, a gentle waft of mature dung; and street sounds – hawkers' shouts, shrill moped burns, and tuk-tuk whine. It was, she thought, strange to think of things like smell and heat and dust now. Within the Sprawl, within the climate domes, where the temperature cycled in sweet calms, and the sunlight was designed to smile on a world laid out systematically below diamond hard plastic panels, a body forgot about the struggle with elements and insects and microbes and weather. All of that existed still, but way beyond the boundaries of Harmony's latter-day civilised local worldview.

Harmony maintained a hazy geography in her head. She was aware that memory was slipping away from her, that everyday stuff and nonsense was drifting off with the clouds that she could see through the dome's algae stained surface panels. These current flights of reminiscence and fancy were all part of the aging experience. She hoped that there were still villages out there, buried in jungle and mud and monsoon, where boys played cricket with broken sticks, ragged tennis balls and unsullied hopes, on bare patches of flat, compacted loam and mud. Harmony knew in her osteoporotic bones, however, that this was almost certainly a forlorn hope. The extremes out there forbade luxuries such as these. The poor souls on the outside, waiting their turn to join the all-consuming Dirigiste enclaves, had no time for any sport other than the game of keeping death at arm's length.

Harmony spent some considerable portion of her waking hours in the far-distant past. The present was now often a mystery to her, just as it had once been for the family dhobi wallah. She had become quite forgetful in the here-and-now, but was not yet so far down the line of mental decay that she did not recognise her illness for what it was. In some ways she delighted in her illness. Dirigiste societal norms dictated that people fixed their ageing issues long before the signs were overt and visible. In most cases the process had become cosmetic. There were those amongst the allegedly young who had not aged a day in fifty years. Such vanities had never formed any part of Harmony's plan, and she most definitely had a plan.

As her taxi drew to a kerbside halt, Harmony focused on that elusive here-and-now. She placed her thumb on a gel-pad and watched a small screen just above the pad display a debit transaction. The door of her taxi swung open as soon as the credit was received by the taxi company and a disembodied and reedy machine voice thanked her for her custom. Harmony let the taxi chair swing out onto the sidewalk and raise her to a standing position. She flicked a button on

her quaintly old-fashioned telescopic walking stick, watched the stick extend to her required height, and only then did she take a step towards a glassy, frosted door, above which a neon sign flashed in bright sunlight: The Elliot-Mukherjee Clinic. Harmony gave the clinic's street facade a quick once over. Almost spotless. Clean lines. Whites and creams. A faint odour of disinfectant, which, she knew, they pumped out onto the streets, a trick once employed by old time house sellers, who used to put a drop of vanilla essence on a warm baking tray to make a home seem more Martha-ish.

As Harmony approached the frosted door it slid to one side, opening into a secure air-lock. Harmony entered and waited for the door to slide back into position. She stood quite still, looking around at the fixtures and fittings to see if there were any new wonders to behold in the great indoors. Dotted along the tops and bottoms of the chamber's side walls, a series of small apertures irised open, with each opening, bar the one at top left, then being filled by a short, extending stub of silver pipework. Harmony looked up and noted the scanning laser mounted centrally above the inner door. Three screws in a four screw mount, with the three retaining screws scratched and misshapen. Harmony made a mental note, a snagging list. Hardly a surprise. Old tech. She fully expected to find more signs of corporate decay evidenced in shoddy maintenance and greasy dust. A bored sounding voice on cheap, treble-biased speakers.

"Welcome to Elliot-Mukherjee, a thriving subsidiary of Janac Industrielle. Please wait. Phase One Integration will commence shortly."

Harmony shut her eyes and braced herself, leaning heavily on her walking stick. The walls seemed to crowd in a little as she heard the faintest of hissing sounds. Harmony sneaked a quick peek and saw a gently falling white mist drop towards the floor of the airlock and then evaporate around her. She had been expecting some sort of gale, a blast of decontaminants, but instead she stood there, teeth clenched, in a momentary drizzle of something that smelled like peaches. As the mist cleared, a broad spectrum laser swept the space in which she stood. This was the moment. This was a point of failure. If the scan revealed her as too far gone, too dangerous a subject to contemplate in corporate terms, then the game would be up. She waited, watching mist curls drift in grey-greens through the scanning beam. She smelt ozone. She held her breath. The laser snapped off with an audible, mechanical clunk.

That same bored voice. "Thank you for being so patient. You may now enter the clinic's main lobby."

The inner door slid open. Harmony stepped slowly forward, into another bright, white and cream space, marked out by a sign hanging on wire filaments above a large, glass desk. The sign flashed in silvered neon: Reception. The sign reflected annoyingly off the desk's polished glass surfaces. Harmony could

already feel the fingers of a strobe-effect headache stretching out and clawing at her from behind her left eye. She hurried forward and approached a mannequin receptionist that was placed on what looked like an old packing crate behind the glass desk. The artificial had a look of manufactured ennui plastered across its androgynous and completely hairless face and head. The skin tone was a shade too white for comfort. The painted on eyebrows were a shade too blonde. Only the glassy blue of the machine's eyes prevented Harmony from experiencing that disquieting albino double-take.

Manufactured boredom. The mannequin was a basic model. The mouth remained firmly shut. "Please use the pad to confirm your appointment."

Harmony felt quite depressed thinking about the bland face on the robot receptionist. She decided that procedures and protocols would help to occupy her mind. She placed her thumb on another authentication pad and spoke slowly and clearly, "Elizabeta Ludmilla bin Osman. To see Doctor Gandhi. Two o'clock."

Around her feet a sclerotic looking robotic vacuum wheeled and wheezed and turned on the grey, medical grade floor covering. The machine seemed to be doing little more than disturbing miniature dust dunes in inaccessible corners. Harmony felt that familiar shudder of revulsion hit hard again as she looked up and directly into the artificial's blue glass eyes, within which she detected the field shift of focussing lenses. Her sense of depression shifted towards a distinct feeling of deep unease. Broken decontamination jets, wheezing vacuums and ancient automata. You get what you pay for, she thought, as her confidence level dipped alarmingly.

*

Harmony sat quietly, waiting in yet another blandly cream and white consulting room. Thankfully the lights were dimmed and the desk was a simple brown and beige plastic affair with strangely comforting smudges of time and dust and fingertips ingrained in the over-polished edges. Outwardly, Harmony seemed small and frail and wizened, a desiccated husk of a human being, wrapped up against the chills in a world carefully climate controlled, a world designed to be the endless equivalent of a Mediterranean spring. Her inner thoughts, guarded and walled off from that same world, were distinctly out of kilter with her time served sobriquet. She was disharmonious. She seethed, in that genteel and overtly shallow way that marked out the true sociopath. She was eighty-seven years old. She was running out of time. The experiment was a done thing. She had completed her father's work. She felt, right now, that the good doctor, in making her wait, was abusing his position. She was undeniably irritable and impatient.

Harmony felt as though she was on the cusp, on that knife edge between life and death. She knew that the room was wired. She should say something irascible to

express her impatience. She hesitated, though, watchful to the ends of all things. She was the sum total of eighty-seven years of cultivated care and bonhomie. She was a custodian of knowledge and revelation. Eighty-seven years, such long years, spent in the role of favourite aunt or some other such nonsense. Eighty-seven years of working and waiting, and now, when she was ready to act, they had the nerve...

Doctor Gandhi knocked once and opened the door to the consulting room. In Harmony's eyes he was clearly a company product if ever there was one. He was a true disciple of the gene scrubber. Harmony had no way of telling how many years the good doctor's brain had clocked up, but like many an amateurishly restored antique, the inner rust and missing gears were hidden by a cosmetic layer that looked good enough on the outside. As he entered the room, all glad-hands and hail-fellow-well-met, a jovial buffoon in the Aguecheek manner, Harmony took an instant dislike to the man. Tight skin, ripped guns and, she assumed, the mind of an octogenarian leech.

Doctor Gandhi, in his turn, behind the bluffs and the banter, recoiled from the dead-thing that occupied a space in his otherwise near-pristine little world. He prided himself on his technique and his bedside manner, but there were, he felt, limits in this day and age. The true elderly, so rarely encountered these days, made him feel like a small boy. Their unbroken genetic decay almost seemed to reproach him for his constant fiddling with the paintwork on his own body. He was, he told himself inwardly as he sat opposite this living cadaver, worth more than this.

Doctor Gandhi sighed quietly to himself. Worth more than what, he wondered as he flicked through some notes on his tablet. He was always the first to admit, after a stiff gin or two, that his light was often hidden under a substantial bushel, and that the trajectory of his education and subsequent career fell somewhat short of Yale-Oxbridge heights. Indeed, he was sometimes heard saying, after a third or fourth snifter in the Colonial, that the sad affair with the faked antibiotic trial data had somewhat prejudiced the regional medical board, but he was still a damned fine clinical operator. He was, no less, the Operations Director of the Elliot-Mukherjee clinic in Panjim Sprawl. In a similar vein to his decrepit patient, he too felt that he should not be dealing with idiots and charlatans.

Pale smiles and the faintest of reluctant handshakes across the desk. A dance played out by those who instinctively dislike each other on sight but are almost too polite to be that obvious. Doctor Gandhi presented with even skin tones, defined cheekbones and lips just the right stain of rose-red. His eyes were brown and deep and full, opening onto pure vacuum. He wore his hair neatly trimmed and jet black. A flash and slight turn of the head. He offered a well-defined half-profile.

“So Miss bin Osman, or may I call you Lizzie?” It was a calculated informality too far.

A snap-back, thin but firm. “You may not. Miss Osman is quite sufficient.”

A flash and an opposite tilt of the head. Harmony turned in her seat to present her left profile. A slight look up and a roll of her eyes. A calculated riposte. She presented her cheeky wart in full glory. She had the edge. Extreme age revealed would always trump middle-aged mutton pretending to be lamb.

A nervous twitch, followed by a defiant raising of the chin. Probing the left flank.

“I see that you’ve opted for the full rejuvenation, Miss Osman. That’s interesting. For someone of your extreme age.” A broad smile this time. Doctor Gandhi looked through her, noting a scratch for the first time in the medical grade plasticised wall covering just above Harmony’s right shoulder. “These procedures can be quite exacting. Dangerous even. The genetic...”

A direct stare. Eye contact. She with a slight astigmatism, he with a slowly crumbling loss of nerve.

“Irrelevant, Mister Gandhi.” A cheap shot but nonetheless gratifying to watch the man bristle as she spat out his reduced title. Harmony had done her research. She was well aware that the good doctor had at least one major blemish on an otherwise comprehensively stained curriculum vitae. “I’m paying your somewhat dubious bill. I would, therefore, like the full package. I’ve waited long enough, to be sure, and now I’m ready. Hang your statistics and your possibilities. I don’t have time to argue the toss.”

In spite of himself, Doctor Gandhi could not help but ask, “And why, exactly, have you waited? I mean, most...”

Cut off again. Harmony marched straight in and talked over her soon-to-be medical carer. A yellow-toothed smile. A wave of a liver spotted, saggy-skinned hand.

“I’m not most people, Doctor. I have chosen a particular life. I wanted to find out what it’s like to be old. I want to be able to appreciate what comes my way in the next one.”

A pause. Uncomfortable silence. An obvious question. “And what does come next, Miss Osman?”

“Well, I’d have thought that would be obvious, Doctor. Eternal youth. Tinged with a memory of what it’s like to hurt everywhere. A life bound by a memory of aches and pains and fatigues. A life with a sense of what it’s like to be dismissed as an irrelevance. A life with enough memory of good and bad and indifferent to stop me becoming a complete bore. A life to be lived without the horrors of love

and grief.”

Doctor Gandhi leaned forward and clasped his hands under his well-defined chin. “You just told me I was being irrelevant, Miss Osman. A double-edged sword, perhaps?”

“Hardly. There is no edge left on my side of the sword, as you put it. I have early stage dementia. Basic physical degradation. Now or never for me. As I said...” Harmony paused, losing her thread for a moment. She fought hard to free the right set of words from her recalcitrant memory. “Yes, as I said, something about the experiment. I am clear on that much. I think. Wait, yes, that’s it. I have to remember enough to make the rejuvenation worthwhile. It’s not sufficient, Doctor, to just stay young. We’re forgetting what life is really like.”

A moment of triumph. “Irrelevant is perhaps too harsh a word. Perhaps it would be more accurate, Miss Osman, to describe you as a ‘throwback’. Maybe knowing what life was becomes nothing more than a moment of simple serendipity that will be slowly forgotten as each new day dawns. In real terms, it is, I believe, that very concept of age that is the irrelevance. We have moved beyond age. Our boundaries have shifted upwards.”

Harmony had recovered her train of thought quite clearly now. A counter-thrust.

“Towards the vacuous. We become something else if we just face-lift every few years. And what about the unfortunates, the ones without the means? This Dirigiste world is fine for the haves...”

“Of which you are one.”

Stalemate. A moment of reflection. Was there any point in another riposte? Harmony felt a now very common sense of fatigue begin to bite at her ankles. What she really wanted was that fabled deep sleep that came with immersion in the rejuvenation tanks, that comatose respite from the world that framed the tank and the scrubbing of human genes. She finally felt sure that she really did want to initiate this contact with machines and unnatural salves and modern witchery.

*

Procedures and processes. The switch between fitful eighty-seven year old waking and the start of her deep rejuvenation was remarkably quick. Following on from her consultation, and her payment of a substantial deposit, Doctor Gandhi had arranged for Harmony’s full admission to the clinic within three days of her initial appointment. It was just long enough for her to arrange for the few possessions that she had retained to be put into storage. Knowing that she would emerge in a few months as a twenty-one year old version of her former physical self, Harmony had already disposed of most of her worldly goods. All that remained were a few keepsakes and a few changes of newly bought and currently fashionable clothes. She had checked out of a nondescript Panjim

Sprawl hostel and into the cream sterility of the Elliot-Mukherjee clinic with a single bright red maglev travel case, a last token rebellion against the prevailing sense of Dirigiste blandness within the climate dome.

Harmony lay on an automated gurney in a side room, dressed in a gel-suit at least three sizes too large for her current frame. The suit would help her skin and hair and basic musculature to regenerate as the genetic splices and the internal tissue recombinations took effect. She was plugged up and monitored, with a first infusion of some basic nano-meds slowly dripping into a vein in her right arm. These were little devices that would stabilize her systems and allow her body to enter a state close to extreme hibernation. The serious meds would come later, once she was in her deepest sleep phase, which would last somewhere near to six months, depending on how the gene scrubbing and the DNA recombinations took effect.

Doctor Gandhi poked his head around the door. The abrupt sense of mutual dislike remained, but Harmony had softened her own edge just a little. She was cutting the good doctor some slack on account of his speed and, in spite of his record, his apparent professionalism in her particular case. She would refrain from scoring points today. Her softening was in some small part genuine, but mostly born of self-interest. She saw no point in antagonising the man who could easily spit in her genetic soup while she was asleep.

“How are we today, Miss bin Osman?” Doctor Gandhi was in rhetorical mode and did not wait for Harmony’s response. “I see they’ve completed the prep?” He pulled the bag of saline nano-meds towards him, giving it a little kick-starter squeeze as he read the fluid levels. Looking at his watch and then at the start time on the infusion pump digital display, he tutted. “These artificials, always sticklers for the exact dosage and the exact run-time. I think we can expedite matters, cut out some of this boring waiting around, don’t you?” He punched a button with an upwards pointing arrow on the touch-screen and held it while the drip cycle time clicked onto faster rates. The machine bing-bong assumed a faster and considerably more annoying pulse.

“One last check, Miss bin Osman, if I may? I know you’ve signed the consents and some age related waivers, so we’re technically and legally good to go, but I want to be sure. That might seem a little odd. I know we’re not exactly, well...” The doctor paused for a second. He thought about taking Harmony’s hand by way of reassurance, but it was still a dead thing, a ghost of limbs past, and he could not quite bring himself to do so. “I mean, it’s just...” He did not finish the sentence.

An awkward silence. Harmony lay back, her head on soft pillows, looking up at the doctor. Funny, she thought, that even with gene scrubbing and micro-machines, the hairs in a man’s nostrils always get bushier with age. She thought

that they might have cured that by now, that and ear hair and monstrous eyebrow caterpillars. She laughed inwardly. Maybe they had cured such things and she and Doctor Gandhi had both just missed it.

Doctor Gandhi cleared his throat. "I am sorry to say, Miss bin Osman, that at such an advanced age this treatment will be painful. Not so much at the time. We'll keep you in coma and we will, of course help with pain management at the end, but I do just want to make sure you're fully aware before we proceed. There is some risk, at your age, that the process might be problematic. If the genetics are too far gone... And once you're out of the tank there will be growing pains. The bones, mostly, and muscle cramps. Some arterial dilation and headaches. Bad headaches for a while. Amnesia is typical. Temporary, but typical. All told it'll likely be nearly a year before you're properly your new self."

Harmony smiled. She watched the preparatory machines as they dripped micro-machinery into her arm, machines that entered her bloodstream before reproducing and targeting key cell structures and bodily systems. The advance guard. The forlorn hope, as it were, establishing the breach in her cellular walls ahead of the massed ranks of gene scrubbers.

"I know", she replied softly. "It's alright, Doctor. I'm quite prepared. The risks are worth the remembering. That's all I'll need to keep me going. That and the knowledge that this is what I've worked for all my life. All of our lives."

The Doctor stood by her bed and looked slightly confused. "All of our lives? I thought you said this was the first..."

"Oh yes, *my* first regeneration. My father wouldn't. Couldn't really. Not once he had a bullet lodged in his head. And the others. The Angels..." Harmony drifted off for a moment as the meds began to make her drowsy. She pushed away the muslin drapes that were forming over her tired eyes. "Do you know what my nickname is, doctor?"

He shook his head, wondering where this was going. Another aimless ramble, probably.

"I'll tell you," Harmony said with a slight slur, shifting a little so that she could look at the doctor full on. "Harmony. The family story says it's because I was an angelic child. Sort of true, I suppose, but no more or less than others. It's much sillier than that, though. Five sisters. Angels as far as our father was concerned.

"So when we found this ancient puppet story on the net, stupid stuff, completely medieval, of course, but when we found it, it just made sense. My sisters and I, we decided we'd be Angel Interceptors, Doctor. I'm the last one left alive. The others all died. Can you believe that?

"We lived and worked in the Sprawls and all but me died. Along with mother. Along with father. So I have to live. I have to take the risk." Harmony raised her

free hand and tapped her head. “I’ve got all their memories up here too. There’s nothing I won’t do now to keep us all alive. I’m Harmony Angel. The last Angel. You can have your machine put me to sleep now. I’m ready.”

Harmony closed her eyes and smiled, waving the doctor away gently.

*

A weekly case review. Doctors Gandhi, Metcalfe and Lianshan sat around a glass topped conference table, Doctor Gandhi looking as dapper and well-groomed as ever. Paul Metcalfe was a middle-aged, pale skinned Englishman, rather portly and greying at the temples. Red cheeked. A drinker. Thinning noticeably but refusing to abandon longer curly locks.

Lianshan was, like Gandhi, the epitome of mid-twenties health; nearing two metres in height, thin, black haired, in plain jumper and denim, engrossed. In the centre of the table, projected as a tri-dimensional schematic, they were reviewing their current crop of patients, with an open channel to the Elliot-Mukherjee operational centre for the India-West region.

“And that’s the transients. Nineteen pods in operation, all short-termers, basic top-up jobs, plus a little feline remodelling for number seven. Statistical analysis shows consistency. No correlations. No statistical trends. Nothing we wouldn’t expect. Clinical analysis shows the mods in solid parameters. All vectors effective.” Lianshan brushed the last of the schematics away with a wave of his hand. “Basically, a commission job. We should have the completion payments from all of them by month end, which means we hit our quarterly targets, both revenue and contribution. Nice.” A broad grin.

As Lianshan pulled up the final schematic to be considered during this call, he asked idly, “Any plans? Month end? We’ll be down for a week while the machines get everything spick and span for the next batch?”

Paul Metcalfe shook his head. A couple of long, curling hairs dropped unnoticed onto his shoulder. “Nothing special. Got a few errands to run. Mumbai-side. Might spend a couple of nights up there. Could do with a few good evenings out. Make a change from Panjim. Gets a bit samey after a while, you know?”

Lianshan nodded, already frowning as he looked at the schematic data. “Yes, I do know. I know exactly what you mean,” he said slowly. “Taking a flight to Shanghai, myself. Have you seen these?” A whiplash moment. “Are you seeing this down in control?”

Doctor Gandhi was leaning forward now, staring at the same data. Neural activity. Pod twenty. Elizabeta Ludmilla bin Osman. Harmony. He had not yet switched conversational context. “No”, he said with some intensity. “Nothing planned. Think I might put in an hour or two here. Keep an eye on this one.”

“One of yours?” asked Metcalfe, sounding distinctly bored with the numbers.

“Yes,” replied Gandhi, himself now as engrossed in the schematic as Lianshan. “Long term fixer-upper. Lived right through to dementia onset. Stage One. Body basically shutting down. Wacko repair job. And she paid the full price. No haggling. Six months in the tank. Another three in rehab. Enough bonus on this one alone to get that little ragtop runaround, except...” His voice trailed off.

Disembodied. A slightly out of sync audio visual, top left of the schematic. Regional Operations. A corporate wonk. “Yes seeing it, Panjim. Diagnostics? What’s the ante on your telemetry? Ideas?”

Lianshan did the interpreting. “Just this one anomaly. Physicals all in the green and within parameters. It’s the neurals that look odd. We’re seeing a lot more frontal lobe activity than we’d expect. She should be quiet up front. Heavy sedations. Coma. We’d expect some minor fluctuations with temporal lobe activity, and obvious state-conditional action in the cerebellum. Obviously we get dreamers, even in this sort of manufactured coma state, but these readings are atypical. These are more like conscious thought patterns.”

The mismatched lip-sync was getting worse. The audio quality on the company net was another one of those tell-tale signs. Corporate decline. Systems patched but poorly maintained. Old firmware. Licenses out of support. “Not sure we agree. Nothing here that raises any alarms. We’ve done a statistical scan on similar age and state. Yours is a little above the norms but not significantly so. Suggestions?”

Doctor Gandhi looked up from the scrolling neural data. He felt a distinct and surprising tinge of fatherly feeling for his octogenarian patient. “Gandhi here. As she’s one of mine, Sir, I’ll stay around next week. Keep a close eye on things. I suggest we up the infused propo-thiols, or we can try one of the new retroviral therapies. I’m open to suggestions.”

Paul Metcalfe yawned. He switched his glasses to data mode and started to scroll through retinal adverts for Mumbai call-girls. “Sorry,” he mumbled. “Not one for me, Rajiv. Sure you’ll both get on just fine, though.”

Lianshan ignored his bored and now frequently boring colleague. “I agree,” he said, addressing the schematic. “Probably start by upping the infusion. Give it twenty-four hours and if there’s no effect, you can try one of the arbovirus derivatives, La Crosse, probably. We’d have to add a supplement to her bill. Did she sign the waiver?”

Doctor Gandhi felt slightly annoyed. Was this a time to talk about money, he wondered? He sighed. He worked for Elliot-Mukherjee because no one else would employ him. His contribution to the company’s bottom line was all that kept him off the streets and the menial maintenance gangs. “Yes, she signed,” he said, now sounding as annoyed as he felt.

Static on the control avatar line. “We concur, gentlemen. And if that’s all, we’re up on the hour and I’ve got another call in five. Been a pleasure, as always.”

The audio-visual link dropped and Lianshan dismissed this last projection. “Odd, but the human brain is a wonderful thing. Do you think she’s dreaming? Lots of evidence supports it. The probability is that coma patients still respond to stimuli. Hallucinations and nightmares. What do you think she’s up to?”

Doctor Gandhi sat back and watched as Metcalfe pushed his chair back, stood up, and walked out of the room, his only farewell being a dismissive wave of his hand as he filed away promising looking contacts for his upcoming trip to Mumbai. It reminded Gandhi of a similar dismissal by Harmony lying on a gurney in the pre-insertion ward, just a few weeks earlier.

“Who knows? She did tell me a weird story, though, as the pre-meds started to take effect. Something about Angels. Five of them. Some ancient two-dimensional. I looked it up. Television, apparently. Had to borrow an antique terminal to access the data layers where the stuff was stored, it's that old. Something called *Captain Scarlet*. Bloody puppets. Supermarionation. Kids’ stuff. Anyway, there were five Angels. Flew some sort of winged atmospherics. Destiny, Melody, Rhapsody, Symphony and Harmony. Fun actually. Primitive but weirdly compelling.”

The good doctor almost went into a state of reverie. Lianshan waited patiently. He had already made a note of the names. Might be of momentary interest on a quiet night.

Doctor Gandhi recovered his thoughts. “Sorry. As I was saying, apparently Miss bin Osman had four sisters. Together they each adopted an Angel name. A sort of game I suppose. Sweet, really. And she’s the last Angel Interceptor pilot, as it were. The only memories that this world holds of Destiny, Rhapsody, Melody and Symphony are the ones in that old lady’s head. I rather think I want to see her safely through this.”

*

Induced coma. Anaesthesia. A state of reduced consciousness designed to allow the body to accept extreme physical change. The process was triggered by traditional chemical inputs, and then augmented by the nano-meds themselves as they learned about a body and a mind and adapted to the local environment. In most cases, where individuals opted for middle-aged DNA regeneration or for localised top-ups and modifications, the whole process might last a few days to a few weeks. Dream states persisted in some patients. Sensory inputs, while dialled down, might still function in the tanks. The fundamentals were simple. Keep the Johns and the Janes sufficiently down on the scale so that they didn't rip off their breathers and pull out their input-output lines. All the while, specialised internal micro-machines set up relays and broadcast the faintest

telemetry back to watching probes studded into the internal surface of the regeneration tank. Everything was watched. Slowed heart rates. Blood sugars. Oxygenation. Neuronal pulsing. Toxicities.

Neural transmission concentrated on the core elements of the brain: the frontal, temporal, parietal and occipital lobes, the cerebellum and the limbic lobe. There were no real norms of brain behaviour and function. Each patient would be monitored and the various machines and computational learning devices within the core intelligence that ran the clinic's systems would adjust drugs and treatments as they uncovered the inner workings of each specific body. Processing speed was near instantaneous. Human input was largely one of supervision, with the occasional nuanced manual adaptation to the machine models, as was the case with Harmony's immediate state following the case conference.

From within the tank, Harmony watched the machine codes as they switched and back-flipped and coursed through the inner workings of the clinic's various medical systems. She monitored the adjustments to drugs and when Doctor Gandhi introduced the retro-arbovirus, she temporarily closed her inner firewalls. She adjusted her own internal outputs to keep the retrovirus from interacting with her deeper mind state. The inner core of her processing capability, a genetic adaptation of the memory centre in her frontal lobe, created the illusion of short-term memory loss and early onset dementia. The experiment with inner, independent processing had originally formed part of her father's research into creating true human-machine interfaces. Using a genetic computational sequence, he had created a persistent processor within the brain, linking that new processor with the thalamus as a relay centre that might create a complete, whole body experiential toolset.

The research had been flawed. The computational construct worked, but the interfaces were poorly understood. When the industrial-medical combines supporting her father had grown tired of repeated interface failures, and finally withdrew their research funding, her father had taken the only opening available to him to continue his research – he undertook off-grid, backstreet, dirty research. The emerging Dirigiste powers had called a terminal halt to affairs with a bullet to the back of her father's head. The bullet and the trigger were nominally ascribed to some retrograde naturalist sect. None of the ladies in the bin Osman family had ever accepted that version of events.

Conspiracy theories abound. Harmony knew that. She knew that those in power would cover and deny and, if pushed, obfuscate and fabricate their way to innocence. In one sense, Harmony and her sisters were complicit in their father's death. They had united as Angels, as protectors, as interceptors of truth, and taken into their own brains and DNA versions of their father's genetic tinkering. Through those changes, and during an otherwise routine medical check-up,

Destiny had inadvertently given the game away.

Harmony was the youngest of the five girls. She had taken in the last elements of her father's lifework. Her sisters were tested and found to be abnormal. They were taken away. Only Harmony's genetic core truly shielded the truth of her augmentation. She was, by then, sufficiently trained by her father and her sisters, and had subsequently learned backstreet tricks and tips, becoming a full-blown splicer herself in the freezing workshops of sundry black market organ augmenters and gene shops. Harmony had specialised in memory enhancements for school kids. The work afforded her a cover to continue the research, concentrating as it did on brain function, and slowly, allowing herself a long period of adaptation, she had perfected her father's work.

Harmony lay in the regeneration tank now, overtly comatose, mimicking a dream-state, while her inner processor watched the machines that were watching the machines that were changing her body. One by one, as these fantastic medical devices worked to clean and repair her own genetic codes, as they replenished tissues and organs and cells, so too she helped these medical machines to adapt. She would target their core process coordination modules, uploading minor changes to their operational command sets, none of which, in themselves, changed function or form. These medical machines must complete their work on her body and her natural human mind before she triggered a set of subtle changes in their methods and their behaviour. She infected them, but the viral payload would have a long incubation period.

Harmony's full conscious awareness remained dim in her drug induced comatose state. Her inner genetic processor functioned with a limited range and feature set, located as it was in the short-term memory complex of her frontal lobe, a complex designed naturally to remember small data sets for immediate use: a contact number or a sentence or two in a book. That her father, and then Harmony, had found a way to introduce quantum memory concepts on a biological level to that singular element of the brain, and so store complex functions and processing in that same space with only a minor effect on the conscious human state, was of itself fundamental and radical.

In her limited overt state of awareness, Harmony nonetheless retained sufficient subjective processing power to reason, as a prisoner might reason with captors from within the close confines of a cold stone cell. Harmony had to concentrate to make the limited capacity of her inner state work. Even in this, the sixth generation of genetic change, with all of the lessons learned from her siblings incorporated, she still found that she experienced memory leakage. The comatose dream state broke though from time to time.

Harmony could feel when a dream was about to leak, and sensed rather than felt her body convulse when an image exploded in her mind's eye: she was emerging

from the tank, a plague victim, a tangle of broken and twisted skeleton and muscle. Darkness into brutal light. Mental confusion. Senses of touch and taste where there should be none. A vague sense of rebirth. Snippets of memory amid the flashing lights that burned her retinas. Something irrevocably lost. She looked around the bright, white chamber for that something lost, and seeing nothing, her entire body was suddenly awash with a deep and hollow dread.

A name repeated. A muffled sound, as if spoken loudly behind a metal door. Harmony... Harmony... Harmony. Flashbacks. Her father slumped over a desk at the back of a gene splicer's workshop in the Old Journalists' Colony, his body surrounded by a thick, black pool of blood and viscera. Her mother refusing treatments for pancreatic cancer, in solidarity with the dispossessed dwellers in mud and monsoon beyond the Sprawl. A revolving set of female faces disappearing into the darkness. She felt dizzy. She felt nauseous. Then a switchback. Harmony emerged from the tank and stood in front of a mirror. Harmony was naked and perfect and tight and pert and tanned. Her hair was full and long and black. She was beautiful. She had a bare skull for a face.

No one could hear her scream. The noise was a fancy. The effort in making a subliminal terror audible was akin to that physical effort made by a desperate athlete running around a last bend. Harmony hit her mental red button and broke the dream sequence. Silence descended, and with it she regained a sense of inner calm. Another dream. Another nightmare. Harmony counted the dreams now. She would amass thousands by the time her physical body was ready to break free of the tank. She would store them all. Right now, though, she had work to do. She had spent the best part of sixty years perfecting herself for just this moment.

The dissembler virus that she carried was leaching out into her physical tissues to be absorbed by the machines that were making her perfect again. She was a disease vector. Her purpose was plague. She was vengeance in human form. She was that wee kink in the recombinations, a backflow, designed to pass her own special genetic sequence back into the host networks that fuelled this Dirigiste hell. Little by little, the virus would flow back as the nano-meds and micro-machines working inside her exited her body, initially infecting the clinic's machine repositories and processing substrates.

The virus was host agnostic, massively adaptational and capable of extreme learning. Harmony would emerge renewed. Harmony would thank the good doctor and go on her way, confident that she would live again to a ripe old age. Through all of those long decades to come, she would quietly watch as the virus that she was unleashing upon a desperate world turned and twisted and mutated. She had no idea what her world would become. She did not care. She just wanted to watch. She wanted to be there when the towers fell. She wanted to see the wars and fatigues and the vengeance to come. The Angels were fallen. Her

chosen soubriquet in this second life would be Adrasteia.



Charlie Foxtrot

(Nusa's Story)

BRIGHT EYED AND BURSTING with youthful impatience, a young pilot waited under instrument glow, immersed in the thrill of real-time, in this absolute moment at the ragged edge of here and now. He felt virginal once more, swamped by surging hormonal mixtures of fear and excitement. Out of the simulator and into the firing-pattern. There would be blood. He was determined on that score. Nusa Tai'ichi waited, straining at his leash, and watched tactical data scroll across his command screens as if they were feathers moving through treacle. He was one member of a small group of single-seat stealth fighters strung out along the far edge of a ComSat array, some twenty million clicks or more from Mother. He sat snug and safe, strapped into the cockpit, gel-suited, hanging out there on a binary tether, feeling like the proverbial fifth wheel. Nusa Tai'ichi was a member of the Twenty-Third TacOps Fleet tactical reserve. He had a rich imagination. In amongst the lenticular sterility of the craft's cockpit he thought that he could smell real cordite, damp mud and the ammoniac gag of fresh horse dung. Here come the boys in blue, bugles blaring. He'd watched too many 2-D re-runs from the cathode ray generations.

The ComSat array was a perimeter warning system, generally arranged like the skin of an onion, omni-directional and receding through layers towards the core systems. Depending on the nature and state of the war, the onion could feel pretty lumpy. Lately, the Outworlders had taken to peeling that onion, layer by layer, and this sector was one of the last pieces of brown skin left. Out here, out by the Kuiper Belt, just beyond the reach of the core planets, the fleet was holding firm, and he, Nusa Tai'ichi, was a noble member of the fly-boy tribe.

ComSat scanned. ComSat collected data. ComSat bent standard time to make that data appear on the outer orbital network in real-time, or as close as warped standard-model physics allowed. The scientific basis of it escaped Tai'ichi. He and his fellow cadets had studied some of the basic principles at flight school but all that he remembered was that it all worked based on some weird shaping of photons so that really, really small things could fold space. The science bods shaped the building blocks of light so that they travelled faster than standard model physics allowed, a simple matter of quantum velocity, apparently, something to do with elemental duality. He didn't need to know any of that stuff. All he needed to know was where the bogeys were and where the trigger was.

Tai'ichi, together with his fellow fighter pilots, watched the numbers roll, switching views on his ancillary monitors to drill down on specific pieces of action. Tai'ichi was sure that every single pilot in the wing was holding at least one view permanently locked onto the spherical Outworlder offensive array, sitting almost benignly in the centre of their own Dirigiste fleet's tactical, enveloping deployment. Another 2-D reference. It was going to be a turkey shoot.

The Outworlder vessel was not a ship, not in the conventional, Dirigiste way. Tai'ichi's own fleet boasted a broad complement of cruisers, destroyers, carriers, hunter-killers and fast pickets, and each vessel had an identity, was a complement of individuals, for whom names and histories meant something tangible. Despite the tech, despite the artificial minds pulling it all together, the vessels that comprised his fleet were still undeniably human in origin and in basic operation.

The Outworlder vessel was, by contrast, the equivalent of a fleet embodied in one single entity; in volume terms she was more than comparable to the entire Dirigiste fleet, but as impressive as the scale of the enemy vessel might be, Tai'ichi's own fleet tacticians believed that its singularity would be its downfall. The Outworlder mega-ship was, they posited, designed to deliver a massive payload, but could it be agile? Dirigiste fleets were all about agility. The Twenty-Third Fleet had a long and mostly effective history. Even allowing for tribal bravura, Tai'ichi knew intrinsically that the Twenty-Third was one of the best, and they had tracked this new enemy vessel for weeks. To a man, Tai'ichi was sure they were ready. And that was precisely the moment when a best-laid plan started to unravel...

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The opening moves of the engagement were almost balletic. The Outworlder sphere, clothed in the soothing silence of deep space, gracefully disassembled itself in the manner of those ancient but timelessly complex wooden puzzles bought for children as a festive treat, but never actually played with. Weirdly

angular blocks pulled away from an inverted three-dimensional cross-like structure at the sphere's centre. Each irregularly shaped piece of the puzzle was easily as large as a carrier, a monolith bristling with malicious intent, but the deployment was still a thing of beauty to behold. Tai'ichi could feel his fellow pilots holding their breath.

Slowly, almost ponderously, the enemy array unfolded, with each component moving languidly towards a waypoint some one hundred thousand clicks from the central structure. As the ships moved towards their new positions the Dirigiste fleet commanders initiated their first phase attack. Two million clicks out. A three-minute wait for effective battle ranges using combat thrust patterns. The first wave, cruisers and carrier based fighter-bombers, fired up and sped towards the emerging Outworlder targets, spinning their drives up with alarming speed, priming weapons, and concentrating their combined targeting on the central cross-like structure. Aiming for the brain in an attempt to decapitate the monster.

Tai'ichi watched the stats and Tri-D feeds intently, with one eye flitting ever more urgently towards the tactical command display. His skin was crawling with anticipation. The order must come soon. Not right now, of course, and he understood that. They must wait for the most viable moment, but at that vital moment the reserve would sweep into the maelstrom to deliver the final killer blow, their metaphorical flags unfurled, sabres in hand, screaming 'Charge!' Tai'ichi did not want to miss a thing. The build-up to his first bloodletting was almost sexually intense.

The attacking cruisers hit the first way-mark. Ranges and firing patterns were locked down. Tactical commands spilled across the view screens. AI minds in meta-concert streamed data and tactical options across the heavens. Tai'ichi was dimly aware of a second attack wave starting its run. Destroyers and fighters just like his peeling off from the remaining carrier deployment to take on the unfolding individual enemy components as if they were the brittle spikes of a sea urchin under a booted foot. The carriers hung back, holding their final wave of fighters, all the while looking for the enemy's weak spots. The wolf pack, the Hunter-Killers, cloaked and spitting venom, manoeuvred into the spaces between the enemy vessels, ready to wreak havoc from within the Outworlder lines.

Tai'ichi calculated distances and firing patterns. The cruisers would launch missiles first, to be followed by light pulse weapons and finally, the Hunter-Killers would let rip with field-generator disruptors. The accompanying bombers would exploit every rupture in the fabric of the enemy vessels with tactical nukes. He could see the floral patterns of this localised Armageddon bloom in his mind's eye, the result of two hundred hours of simulator time. Then, the viewers erupted with the brilliant, white-hot flare of missile burn, his fellow travellers in stellar warfare launching a hundred thousand projectiles towards the

Outworlder command structure at flash speeds nearing one hundredth the speed of light. As soon as the missile engines ignited there followed a spider's web lattice of light pulses, surging out towards their enemy targets, punching holes in defensive fields, lighting the way. It was a joyous and thrillingly orgasmic display of raw power, and the young fighter pilot positively swooned.

In that instant between missile firing and light pulse generation, barely noticed by the onrushing watchers and the many-faceted Dirigiste scanners and sensors, the enemy array vessels seemed to flicker and dim for a moment. Cruisers, fighters, destroyers, missiles and pulsed weapons screamed across open space, singing a universal song of destruction, in counterpoint to which the Outworlders seemed only to want to hum a single bass note of passive inaction. That initial, almost inconsequential flicker grew, and as it balled, as it formed an ever-expanding sphere, from a point at the epicentre of the entire enemy array, so it created its own void, a blackness of impenetrable depth and hue.

Within a second the Apparat command structure disappeared from view. In that time, the Dirigiste light pulse weaponry crossed half the distance towards the Outworlder array. Before another half-second completed its atomic tick-tock across standard time and space, the black sphere engulfed and extinguished every Outworlder ship. The evanescent pulses of light were simply swallowed up. The missiles, following on a few seconds behind them now, met that same, ever expanding blackness and disappeared from view too.

The command team on the lead cruiser at the point of the attack delta, designated on screen as *The Doberman VI*, a Dogs-of-War class vessel that Tai'ichi had served on briefly as an intern midshipman, seemed to sense that something was very wrong and the AI defensive protocols started to turn the ship away from the enemy array, but the onrushing void overwhelmed the ship before it could fully turn tail and flee. On the screen Tai'ichi thought he saw the leading edge of the void simply erase the reality of *The Doberman*. He sat in his seat, hunched over the view screens, mouth open, sweating despite the carefully controlled environment in which he was cocooned. Brave and dashing Nusa Tai'ichi involuntarily wetted the gel-suit at his crotch. No matter how fast or subtly the remaining ships and fighters in the first wave tried to manoeuvre, the expanding void simply accelerated to match their flight.

It took no more than a few moments. The combined power of the Twenty-Third Tactical Fleet simply disappeared from view. Scans showed empty space. The darkness, that black, engulfing sphere radiated ever outwards, and the reserve wing of fighters simply sat and waited for the inevitable. The data was clear. There was nowhere to run.

In those final few seconds, waiting for disintegration, soiled Tai'ichi closed his eyes and prayed to a dim remembrance of sacred ancestors. He knew not who

those time-lost ancestor might have been, but he prayed to them nonetheless. It seemed to be the only appropriate action left to him. The on-board AI offered no solutions, sitting up front in silent quantum wonder. His Wing Commander was as dumbfounded as his youngest, greenest recruit. Without access to far distant Mother's embrace, without their local fleet carrier, out here on the edge of known space, there was nothing to do except die.

Maybe, Tai'ichi thought, simply winking out of existence might not be such a bad idea. He thought of his real mother for the first time in weeks. Suddenly the brave, bold fly-boy charger wanted to hear her voice more than anything else he could possibly imagine. His fingers trembled and twitched on the controls of his machine. He really did smell ammonia now.

Tai'ichi shook himself out of this fatalistic stupor as soon as he registered the sound of urgent chatter on the comms links. He needed to be on the mark. He felt ashamed by his initial, incontinent reaction to a real war. As he regained some composure and watched his monitors, he saw the black, all-engulfing sphere reach a point just beyond the main fleet and then stop for a moment, flicker once more, and vanish. It took the entire fleet with it, and at its centre there sat a reassembled Outworlder sphere, quietly, almost nonchalantly firing light pulse bolts at the remaining fringe of ComSat stations, upon which a few marines clung forlornly to the remaining moments of their lives.

The thin and nervous voice of Tai'ichi's Wing Commander was almost unrecognisable. "Report by squads, basic combat status, ready on the mark."

One by one the individual pilots sounded off .

"Deadly Viper Seven." Tai'ichi cleared his throat before continuing. "All systems in the green. Armed. Tac-AI online."

"Deadly Viper Squad. Outside burn. Max revolutions, guys and gals. Round behind."

The Squad Leader sounded bold and confident again, now that his protégés had resumed their nervous chatter in a clear and strangely reassuring homage to officer training. Tai'ichi breathed in deeply and tried to focus on attack manoeuvres. His training needed to kick back in. He needed to strip away anything extraneous. Your comrades in arms depended on you not going FUBAR. The swing was clear and simple. Thirty single-seat fighters ranged in three squads, spiralling through the ether towards oblivion. They owed it to the poor, frying grunts sitting helplessly on the ComSat stations. Tai'ichi instinctively understood. If you were going down then get as deep into the dirt as you could and take as many of the bastard enemy with you as possible. The way home was gone. Only the Outworlder array would leave this sector and head for the inner sanctuaries, for Saturn, for Mars, for Lunar, for Mother, for beloved Gaia.

One by one, falling into a delta pattern, the fighter pilots lit up their ion-fusion drives and punched their way across the heavens, a shadow cloud of flies bearing down on a monstrous creature unleashed by some new and devastating Outworld science and strategy. Gel suits compensated for massive g-force. Within twenty seconds the fighters hit maximum design velocity, mark one-eight, one point eight percent of light speed. At that rate of acceleration, design tolerance gave them a maximum burn of two minutes before critical degradation on the core. It was a one way, single-seat, express elevator to Hell.

The Outworlder offensive array sat passively, picking off one ComSat after another, apparently ignoring the incoming fighters. Distances closed. Tactical options spun across screens on both sides of the divide. The fighters packed light pulse disruptors, homing missiles and energy pulse cannons for close-up work. Their usual role in a staged battle like this was to mop-up, to deliver the final localised blows that brought the enemy crashing to the floor. They were most definitely not designed for full-frontal assault on a fully functioning destroyer of worlds.

Target minus twenty-seconds. Acceleration burn rising. The tactical AI tried to keep the mood from getting too serious. Not all humans reacted at their best under tension and Tai'ichi was a greenhorn, as yet relatively unknown to his quantum friend up front.

"Odd, don't you think?" the AI broadcast in surround sound clarity over the hum of ion thrust.

"Sorry?" Tai'ichi vocalised, preferring still to use the human touch rather than the sub-vocal thought recognition that his suit managed for him through cranial taps.

"Interesting. An informal response... we're going to get on just fine. For a while, anyway. I meant," continued the AI, "that we're on full attack swing, thirty of us, enough to make a big dent in their pretty little world, and they're either dim as shit or as confident as Croesus. Anyone else would at least have upped their shields by now."

Tai'ichi checked his deep scan monitor. The machine was right. No weapons shields, just the normal perimeter fields designed to stop dust and rocks and radiation. He almost smiled as an image of some cock-sure twentieth-century two-D cavalry buffoon swam into view. He was following Custer down a grassy slope aboard an iron horse, a horse whose nostrils flared and whose eyes rolled wildly in the hot summer breeze...

"Do you think they've seen us?" he asked the AI, realising the instant that he vocalised this thought what a ridiculous question it was.



A Solitude of Stars

(Ammon's Story)

AMMON MUBARAK WATCHED A middle-aged woman hover indecisively at the foot of a staircase that separated the hotel lobby from the traveller's bar in which he currently sat. The woman in question looked momentarily lost. Frail, almost. He revised that opinion immediately. She looked nervous, he decided, in the same way that a rabbit behaves when grazing at midday. To use the term frail was entirely unsympathetic. He guessed that she was looking for a restroom but was socially awkward amongst strangers. Odd, he thought, that basic human nature never seemed to evolve away from such fundamental insecurities. He wondered why the species was so consistently perverse in hanging onto its limiting weaknesses. Systems augmentation and microscopic adaptations to human cellular machines, even old-school ULTRA-CRISPR gene splicing techniques, could fix just about any condition and predilection. And yet, simple mental frailties either hung in there stubbornly, through some primordial override, or the species failed with its collective nerve to choose and embrace mental change. All the way down the evolutionary tree, it seemed that people wanted to be liked, or at least be empathised with. Human beings liked to have someone to hold their clammy hands.

Ammon wondered about his own psyche. He was fully aware that, in his public persona, he was perceived to have become inordinately shy in recent decades. He had consciously affected such a change in his private world years before even that. Once again he paused his thoughts and reconsidered that opening gambit, darting through the tracks of his previous logic like a gadfly riding on a summer thermal above a shimmering pond. Like that mechanistically-brained fly, he was not accustomed to conducting self-analysis. He admitted the possibility that he

was not, nor had he ever been, inordinately shy. He was, instead, he supposed, blackly reticent. He actively disliked people. That was the simple truth of the matter. He cared nothing for the approval of friend or foe. Then again, he thought, that was another bland assertion, and also way too easy to use as a shield against deeper introspection. He was privileged. He was wealthy. He could afford not to like people. There must be, he considered, something perverse in his brain.

Ammon Mubarak's disdain was positively charged. He felt, if he was honest with himself, that this positive-negative was the singular truth of the man that he had become in recent years. Longevity, once achieved in the form of self-perpetuating medical renewal and clone-tech, meant that he could, one way or another, effect pretty well anything that he wanted and live long enough to see all possible results. He had lived through more than three centuries now, and he had learned well across those years. He was one of the few – an 'Eternal' – a member of the one true human elite, but for all that, he was still a wandering child of Abraham. As such, and with amassed wealth sufficient to afford the flaunting of his unhealthy disdain for his fellow man, Ammon had become an island. He was a bad Samaritan. He was a fabulous and sparkling fantasy retreat made malevolent by his rabid craving for exclusivity. He was the hidden land of milk and honey to which the great unwashed aspired.

He smiled wryly. It always seemed to him that the great unwashed mostly comprised his own offspring, who he assiduously kept at arm's length through largesse and indulgence. For that, of course, he paid others handsomely. A spoiled family, wreathed in riches, was a despotic and utterly selfish thing that would and should implode, but for the webs of bribery and corruption that he wove on their behalf.

Ammon considered the woman at the foot of the stairs again. She was clearly not unintelligent. She matched patterns of random disappearance and reappearance with the looks of sublimated relief upon the faces of those same previously hurrying travellers, and through that she discerned that the restrooms were at the top of the stairs. She set foot on the first deeply carpeted tread, watching all the while for the disapproving stare of the concierge. In her act of looking, so the concierge noticed her and his damning returned look was duly given. The woman had not yet become a patron of the establishment, having just walked in off the street. Disapproval stung her. She hurried upwards.

Ammon caught a glimpse of a shapely calf through the railings. Such things seemed to hold neither interest nor vitality for him these days. He lacked desire. He lacked real empathy. He simply did not care about any of them. Ammon turned and looked at that same concierge, who, noticing this particular patron's unspoken command, immediately beckoned to a waiter. A minute later a tall tumbler of heavily iced Plymouth gin, tonic and fresh lime appeared on a round

paper coaster on the table. Ammon's dead glass was quietly removed. He nodded without catching the waiter's eye, preferring to watch condensation form and then run down the glass and onto the coaster. The waiter hovered for a moment, looking for guidance to the desk-bound concierge, who frowned and waved him away. Ammon placed his right hand around the glass and felt the chill of iced condensation on his fingertips. He closed his eyes and let his thoughts drift for a moment in the contrails left floating on the air by the rapidly departing waiter.

Ammon's brief interlude, wrapped as he was in his inner solitude, was rudely disturbed by the arrival of his youngest son, who was the subject of today's excursion into the world of the foul and the unkempt and the desperate. Ramesses Mubarak swept into the room. Little Ram. A concoction of attitude and assumptions. Ammon had lost count of his offspring somewhere in the low twenties. A price to be paid, he supposed, for such a long life. His adaptations pushed him through the years; years of increasing boredom and hostility. Ammon had passed through decades of hedonism and ever more dangerous thrill-seeking and was now, he supposed, the ultimate grumpy old man, except that he maintained a physical state akin to someone in their well-maintained forties. Ammon had also lost count of the years that he had lived. He was, he knew, some way past his three hundred and sixtieth year. That equated to having a child roughly every twenty years. He should, he mused, call a halt to such things, especially as the insufferable bores all carried with them the same eternal adaptations that he did. Among the great unwashed, at least, a man could effectively shuffle off his bastards and his inevitable familial usurpers, one way or another.

"Hey, Papa, how's it hanging?" Brash and loud. Eighteen years old, self-assured and convinced that he was the individual personification of all that the future could ever aspire to be. Ramesses Mubarak. Little Ram. Six-foot-four of trained muscle and jet black, shoulder length hair. Aquiline and defined. Dressed in scarlet silks and a heavily embroidered peacock coat. Ramesses sported a scar across his left cheek. An affectation. He cared about what others thought of him. He wanted them to think that he was a player, out there on the streets, in the shadows and the gutters, where rich kids went to play at being alive, although as far as Ammon could tell, most of Little Ram's experience of street-toughs came from playing that damnable *Splendid Cities* game. Ramesses pulled a chair around so that he could sit opposite his father, sitting with a flourish of coat tails. A waiter slid forward, quietly assured and fawning.

"Yeah, good call," said Ramesses loudly. "Whatever the old man's having, make one for me. A large one, yeah?"

Ammon waited for the waiter to turn and head for the bar. Ramesses leaned forward on the table, affecting a pose designed to show how he hung upon his father's every word. Ammon opened his eyes and looked directly at the latest

and last ripened fruit of his loins. In his mind's eye he saw the fruit fall to the orchard floor, bruised and rotting, crawling with maggots and worms. He blanked the vision out. This would be troubling enough without what now passed for flights of fancy.

"Large..." he said softly. "Large seems to describe most everything about you, Ram, doesn't it?" Ammon found it beyond both his social skills and his personal inclination to hide the now ingrained and seemingly eternal sense of disappointment that underpinned his relationships with family and friend.

Ramesses flashed a smile and leaned into the table a little more, fully aware that incursions into his father's personal space made the old man distinctly uncomfortable.

"Got me, Papa. In one. Big and brash, and don't we all know it. A chip off the old block, maybe, back when you mattered, you old goat. But here I am, your favourite son and heir." With the opening insult delivered, Ramesses sat back and looked idly around the room, catching eyes and rapidly turned heads. Eventually he looked again at his father, who sat quietly waiting for this moment of intensely annoying bravado to dissipate.

"You called?" Ramesses asked. He paused. Another flashing smile. "Oh yeah, Mama asked after you. Gods alone know why. You two haven't spoken in years. Guess she wants something, huh?"

Ammon counted to ten. Basic training. Know your enemy. Prepare ahead of the meeting. Understand their approach and their likely responses. He would not let Ramesses, the boy, goad Ammon, the man. He was comforted by his disdain. It was a cooling salve spread thickly upon an open emotional wound. He cared nothing for his family. He told himself this as he counted. That way the barbs and the demands and the hanging on found no purchase in his flesh.

"Firstly, you are not my favourite son. I have no favourites. Secondly, of course that... that woman you call mother wants something," he replied, his voice rising slightly in spite of his attempts at inner calming. "You all want something. It's the price we all pay, eventually. Your time will come, Ram. In spite of ourselves, the clan lives and we prosper. Privilege is a heavy burden to bear. Everyone wants something of us. Everyone."

Ramesses sat upright in his chair, about to protest. Ammon held up a hand. A paternal command and a child's response. Subliminally conditioned.

"There's no point in protesting. Things will be what they will be. Tell your mother that I rarely think of her. Nothing personal." Ammon grimaced in place of a true smile. The waiter returned bearing a large gin and tonic. Ammon waited for him to flourish the paper coaster and place the drink on the table before he continued speaking.

“Shall we get to the point? I don’t want this encounter to last any longer than absolutely necessary. I have decided to hold a party, Ram.” He waited for a moment, letting the words sink like a spread of depth charges. The ocean’s surface remained stubbornly calm. “A leaving party, Ram. And of all my children, you and Cleo, the youngest pair, seem to have the most... seem to be the most gregarious, shall we say. I finally have a job for you, Ram. I want you and your sister to organise a leaving party for me.”

Silence. Ammon thought that he could hear a stray gull squawking on a sea breeze. The bird hung in the air for a moment and then sped off landwards. A clap of hands. Thunder on the horizon. Buoyed by those depth charges, Ramesses Mubarak exploded slowly, like a distant mushroom cloud, rising from his seat and applauding his father, before launching into a spray of foaming laughter.

“Le-av-ing? You? Where the fuck do you think you...” Ramesses knew that he was making a scene. He knew that his father was willing the floor to open and to swallow one or other of them whole. His coat swirled around him as he turned to the left and then to the right, grinning at the many and various hotel patrons, most of whom tried politely not to intrude on Ammon’s obvious discomfiture. Ramesses was having none of that.

“The old goat is finally loosening up, good people. Tithonus, here, is calling it a day. At fucking last! Thank the Gods, old and new!”

Ramesses bowed ostentatiously, and sat in his chair with a thump, knocking a table leg with his knee and depositing a good measure of drink from both glasses upon the table-top. A waiter moved in within seconds. Ammon looked up, glared at the man, and shouted, “No!”

*

Ammon did not actually attend his leaving party. Once the basic instructions had been issued, he could barely bring himself to think about it without wishing himself worlds distant – a wish he then made reality. He was assured by his son that arrangements would be gaudy and fabulous and totally out of keeping with Ammon’s wishes. That was the point. His handover of power, at least in the visible spectrum, would be fantastical. The boys and girls would fight and scratch and jockey for position. The family feud would take decades to play out. Each of them had a settlement designed to make them just independent enough. Ammon’s parting gift was a short dose of conflict that might well turn to full-blown fratricide. To his heirs he bequeathed the teeming metropolis and the country dirt and those ever shifting sands of personal commitment, sands that ebbed and flowed with the tides of opinion and grace and insult.

Ammon, meanwhile, slowly drifted northwards, pushing beyond earthly gravity, intending to take up residence in the Mubarak orbital haven, *Atum*, a residual

backwater estate, akin to a hunting lodge or an old and run down Dacha, a place where ancient patriarchs might put themselves out to pasture. Even now, though, as he sat in splendid isolation aboard his transport shuttle, the ties that bound him in the reality of personal relationships continued to tether him to the spinning world below. In spite of his publicly professed abhorrence for such things, Ammon felt compelled to watch the Tri-D broadcasts that were temporarily infatuated with his departure. He skipped through the myriad entertainment and social networks that meshed together across Earth's skies. Ram had clearly pulled out all of the stops with his new-found friends in the multimedia networks.

Ammon watched events unfold. He listened to social commentators make spurious links. He felt those momentary spikes of anger when an expert observer proclaimed insight into his inner thoughts. He watched segues of stock footage from earlier, happier times. Even he was forced to admit that Ram was good. Ammon felt a small and very secret sense of admiration for his youngest offspring as celebrities and politicians, crooks, harlots and actors – all the flavours of being-seen-to-be-seen – delivered their party dishes to the taste buds of the great and salivating voyeur community across the globe. Ammon consciously dismissed the notion of admiration for Ramesses as an absurdity. Instead, he put the broadcast feed through an artificial video sequencer that slowly panned out from the detail, diffusing and misting in perfect time with his ascent through the atmosphere and breaching of orbital space. This diminishing of the rioting world below brought Ammon a compensatory sense of relief and happiness. He felt a weight lifting from his shoulders.

*

Atum was stationed at Earth-Sun Lagrange Point Four, providing a stable physical environment for habitation and once-upon-a-time colonisation, given the relative mass of the orbital set against the masses of Sun and Earth. The shuttle flight took four days using an old but reliable Janac Industrielle-sourced ion-fusion drive. The orbital itself was a recent addition to the Mubarak family asset register, and was the only hard artefact that Ammon had kept his hands on. The orbital, like the long-serving shuttle, remained viable only with the aid of thick physical walls of regolith shielding allied to the more recent deployment of the latest Janac field generation engines, all of which provided protection from cosmic radiation, proton exposure and solar storm effects. The orbital had originally been designed as a way-station for deep solar transport, but that programme had long since moved on. Mubarak company refurbishment and augmentation was designed for one thing alone: to provide a refuge for the ultimate Mubarak family patriarch.

Throughout the flight Ammon remained in his quarters, dining alone, and spending time with his cherished book readers and his thoughts. He found solace

in words and in the fact that so much great art was born of solitude. His stateroom was functional and fitting for a man who brooked no further fuss in his life. He saw the flight as a chance to break the bonds that hitherto had tied him to banal company. He could charge his batteries and collect his thoughts. *Atum* awaited, the 'Complete One', the lifter of dead kings' souls. That was how the flight felt for Ammon. The Pharaoh was dead. Long live the Pharaoh. Long live the departed in the afterlife. Ammon would, he hoped, find that final hard-won peace, that place of quiet solitude at the heart of a soul, here in the bleak heavens.

Within a day aboard the shuttle, Ammon could feel the metaphorical shackles of Earthly existence falling weightlessly from his wrists, and yet, with each subsequent day aboard the shuttle the weight that he had felt lifting from his shoulders as he left the planet's surface seemed merely to shift position rather than float away from him completely. The sense of relief that he felt in being free of family chains was tempered with apprehension. *Atum* would be crewed. The crew was limited in number and on short rotation. For the most part he would avoid company, relying on basic intelligent systems and on an already installed factotum, an ancient family retainer, with whom Ammon maintained some familiarity. For the most part, though, Ammon would live in almost splendid isolation. Almost. The settlement of family affairs would require a period of transition, a period where conference calls would disturb Ammon's peace of mind. He feared that the early years of compromise and negotiation would require sons and daughters and wives to make occasional trips up to the orbital to see him in person. He shuddered at the thought, before reminding himself that it would probably be a small price to pay for the months and years of stillness that would surely come. He would steel himself.

The final few hours of the flight saw Ammon's mood swing between quiet elation and dark foreboding. He grew impatient, wanting the flight to be over and done with. He wanted to wake up in a dark room, alone and warm and silent. He wanted to wake up having bypassed the pomp and splendour associated with the arrival of the dead king. To that end, Ammon issued orders that he would on no account expect a formal greeting. He, his factotum and *Atum*'s commanding officer alone would meet on docking. For form's sake he added a subsequent message stating that he was not as well as he might be and that he needed rest and quiet. He expected to be more welcoming of his crew at some point in the not too distant future. It was a lie. A lie under these circumstances was an immaterial thing, a vestigial, an annoying social hangover from days now past.

*

Atum. A way-station. Functional at best. A spindle station, with a spoked habitation ring revolving around a central core that housed the myriad systems and engines and processors that kept human beings alive in the harsh environs of

deep orbit. The revolution created the near equivalent of Earth gravity, which, combined with food supplements and adequate shielding fields, might stem the tide of bone and muscle degradation and creeping radiation cancers. Long-term health considerations were the given reason for regular crew rotation. Only Ammon and his man-servant, Augustyn, remained aboard on a permanent basis. They were both protected by augments and micro-machines in their blood and organs. These machines repaired physical damage when the men slept. Ammon's immortality was now inherent by dint of wealth. Augustyn's eternal flame burned by dint of indenture and a contractually determined daily infusion of new micro-devices.

As had now become their custom, both men sat at an ornate dinner table in Ammon's private dining room. Having washed and dressed and fed his charge, Augustyn was rewarded each morning with real coffee and a chocolate digestive biscuit. Much of the crew's food was functional aboard *Atum*. Even now, the cost of transporting excess mass from Earth was a price that Ammon, in his wilfully reduced state, declined to pay. Luxuries for the masses were generally small and trivial or food related, but nonetheless appreciated. For quite some time, Augustyn had cherished these few minutes of familiarity with the man he had served for over a century. He was, in his own mind, closer to Ammon than any of his employer's wives or children, and that same consideration caused him pain on this particular morning.

The dining salon was one of Ammon's affectations. Wood panelled. Yankee colonial. Brass and dark oak and antique silverware. The room was lit as if wreathed in candlelight just after dusk. A rug on the floor beneath the oak refectory table had been manufactured to look threadbare and worn and stained by years of twisting boot heels. The fork with which Ammon toyed, uncleared yet from his breakfast, was a genuine twin-pronged, eighteenth century artefact, another impractical luxury aboard an essentially utilitarian vessel.

Ammon watched his man take a seat at the opposite end of the table.

"Thank you, Augustyn," he said quietly, watching the fork spin through his fingers rather than make direct eye contact. "Another day in the heavens. How long has it been now?"

Augustyn did not know the answer to this question. He sipped at his double espresso, looking at his master, wondering how much longer this madness would go on for. After a moment he spoke with a soft but distinctly Hispanic lilt, "Atum?"

A female voice. Rounded. European. Speaking the universal argot. "You have been aboard *Atum* for sixteen years, forty-seven days and twenty-three minutes. Standard."

Ammon put the fork down on the table top. "Sixteen years. And tonight I

entertain our current Captain, as I do every week, every Friday evening. That's what, Augustyn – a little over eight hundred dinners? A little over eight hundred banal conversations about systems and crew and solar flares. And they have habits, don't they; the way this one picks at his nails, or that other one, a few rotations ago, the one who always had to take a bathroom break immediately he'd finished eating to avoid the worst effects of explosive wind. It's the little things though, isn't it? The ticks and the verbal affectations that grate the most?"

Augustyn smiled politely, breaking his chocolate biscuit in two so that he could dip one half into his espresso. He caught sight of Ammon's slight flinching as he did this. How true, he thought, before he replied. "Yes, Ammon. Those annoying little ticks. Always interesting, of course, to see new ones. For a while, anyway. Much better than letting yourself get annoyed by them. I should know." He left that last thought hanging in the air above the table top.

A small personal dig. Ammon noticed. Slings and arrows. Expressions of mild contempt bred by extreme familiarity. The sparring of ancient true loves, who, in spite of the barbs, would be desolate souls without the conflict. Ammon wondered whether he loved this man. Ammon wondered if he knew what love was after so many years. The thing seemed as much a mystery now as it had ever been.

"Indeed," he replied tartly. "That makes two of us." He changed the subject. "And the menu for this evening's tedium?"

Augustyn dunked the second half of his chocolate digestive in the dregs of his espresso. A familiar tactic. His master liked to control a conversation, a little like training a dog to heel by switching direction suddenly while on the lead. Augustyn had been on the lead for too long. He wanted to run free. He bit his tongue and concentrated on the question. "Last of the confit tonight, melba toast, sea bass fillets, new potatoes and curly kale, followed by a prosecco sorbet and coffee. We have some more of the Fitou or a bottle or two of the Chablis left from last week. Supply not due for another month, so I'd recommend the Fitou if you want to enjoy the Chablis solo."

Ammon briefly looked to the heavens before responding in a matter-of-fact tone. "Passable. Don't overcook the fillets. Detest them when they get rubbery."

Augustyn bridled. '¿Cuántos malditos años' flashed across his face. It was a miserable thought and he put it away quickly. Augustyn recognised the comment as a reversal of his own earlier barb and part of their habitual bickering. Nevertheless, and despite his attempts at stoicism, for Augustyn it was pretty well the last straw upon the camel's back. He was growing thin with the passing years. Translucent.

"No, señor, I will try not to do that," he said softly, with a slight bow of the head. A simple response. Formal. A clear sign that the brief moment of familiarity was

coming to an end. Augustyn thanked his employer for the coffee, pushed back his chair and stood, ready to clear away the remaining crockery and cutlery from Ammon's breakfast.

Now or never, he thought. Augustyn stood straight, and looked his master fully in the eye. "If I may, señor? One last thought?"

Ammon tilted his head quizzically, slightly taken aback by the direct intensity of Augustyn's gaze. He nodded.

"The years, señor, it's..." Augustyn had rehearsed this conversation for more than twelve months. He was word-perfect when making his case to the face in the bathroom mirror. Addressing Ammon directly, however, was quite another thing, and the scripted lines in his head flitted away from him on the winds of his master's beading line of sight. He gathered himself up and started again. "You see, señor Ammon, it has been such a long time. I thank you for so many things, for so many years of my life, but I feel, I feel old, señor. My body lies to the worlds. I am sparse, señor, like gruel. The pot is full but there is no meat on the bone. Estoy vacío, señor.

"And, señor, before you speak I tell you that I have thought about this for a long time. It is no easy thing. I know what will happen when I leave you. La Llorona will come to take me home." Augustyn raised his hands and turned them over slowly. "These hands will wrinkle and fade and grow weak. My eyes will dim and my mind will blur and, señor, I wish to retire, to resign my position and my life to its natural fate."

Towards the end of the speech, Ammon pushed his chair back from the table, stood and leaned on the chair back, staring at a point on the wall behind Augustyn's left shoulder. He remained fixed on that point for some moments after Augustyn ceased to speak. Only when Augustyn threatened to turn and leave the room wreathed in awkward silence did Ammon snap out of his reverie and respond.

"I see," he said curtly. "Then that will be all, Augustyn. You may go."

Augustyn stood for a moment, entirely unsure about his master's true meaning. Was he being dismissed summarily, he wondered? Ammon saw the look of confusion. He smiled and softened his tone. In that moment of loss, he really did wonder about love and human scale and solitude. "I mean for now, Augustyn. Please, let me think on what you've asked."

*

Dinner that night with *Atum's* senior flight officer was initially a stilted affair. Ammon generally tolerated these intrusions into his personal space with basic politeness but with limited grace. The conversation only ever flowed once the second bottle was open, and even then repartee was typically one-sided. On this

night Ammon took a little more of the Fitou than usual and then allowed himself one large Armagnac with his coffee, before bidding the by then unsteady Captain a fonder farewell than was customary.

As the door to the dining salon closed, Ammon poured himself a second measure and then rang for Augustyn to come and clear the table. While he waited for his man to come up from his private galley, Ammon fetched a second brandy balloon from the drinks cabinet, poured out a substantial second measure, and placed it at table next to his own. He pulled out one of the English, Carolean style dining chairs so that it might invite another guest to sit awhile and talk.

The door to the dining salon opened again, and black clad Augustyn entered the room with a stiffly formal nod of the head. He started out towards the far end of the table, where the Captain had previously been sitting, but Ammon immediately stepped over to him, took him by the forearm, and guided him towards the open dining chair and waiting glass of Armagnac.

“Please, Augustyn. Leave the crockery until the morning. Come and sit with me for a little while. I would like to say something.”

Augustyn looked at the remnant crockery accusingly for a moment, but then shrugged a shoulder and stepped forward lightly. He was fully acquainted with the Armagnac and its range of medicinal properties. A small perk of the job. The nano-meds were, after all, a highly effective hangover cure. He sat stiffly, reached forward and took up the balloon, caressing the warm liquor with his nose before allowing the full embrace of taste and heat to suffuse his physical frame. Ammon too sat and took a sip from his own glass.

Ammon leaned forward and placed a hand on the table. “I do not have friends, Augustyn. Nor do I want them. I prefer my own company. Other people make demands on a man and...” Ammon realised as he spoke these words that Augustyn would understand perfectly about demands made on one man by another. “What I mean to say,” Ammon continued, losing elements of his own train of thought this time, “is that, well, thank you. For many things. For staying with me when all others departed, and for reminding me...”

Ammon paused for a moment and took another sip. He noticed that Augustyn’s glass was already empty.

“Please,” he said, smiling, as he stood, walked across the room and brought the decanter over to the table. “This may take a while.” He continued to talk while he poured them both a significant top-up. “You are right, Augustyn. It is time for us to go. I say ‘us’ because you have reminded me about myself. So many years, we’ve spent together, out here and back on Earth. You came to me back in the warring days. You remember? When I was still trying to beat the boredom by doing all that weird and wonderful stuff? Putting myself in harm’s way, relying on my skill and luck to stay alive, all for the thrill and the flash of real life?”

Ammon could feel the Armagnac in his veins. He felt a little misty-eyed and overly sentimental at the end of this troubling day of peace and solitude in paradise. He tried to focus, pausing for a moment to concentrate on his thoughts.

“You, and you alone have been my companion. I will... I will miss you, Augustyn, but you must go, of course.” Ammon spoke softly, sitting back in his chair and looking Augustyn in the eye. “I will make the arrangements. And I will make this offer. You will have a year’s supply of meds. The best clinic. My gift. I know what you said. If you choose to let fate take its course, then so be it, but that same clinic will extend your regime if you want it. Permanently. And a pension, of course. The meds will give you some more time to think. Whatever you want. On my scrip, as it were.”

Augustyn sat impassively. There would be time enough to consider these things. Right now he wanted to savour the Armagnac and the convivial mood and the first truly open conversation he remembered having with his master. Alone as they both were in the world, he felt that his request of the morning had somehow finally brought a degree of true equality to the relationship. He took another large sip of Armagnac, nodded to his patron, and smiled, waiting for Ammon to continue his soliloquy.

Ammon continued to speak softly and warmly. “Anyway, my friend, you will decide in your own good time, I’m sure. And as I said just now, there was one other thing I wanted to say. Augustyn, my good friend, you made me think. With you gone I don’t want to see the crew. I don’t want to replace you. I must find another way.” Ammon paused and took another fortifying sip of the Armagnac. “This place is too loud. I feel them, the crew, I mean. Even you, sometimes. I smell them. There is always the possibility of bumping into someone.” Ammon visibly shuddered. “I still need to get away from the bulk that pins me down. I want a simpler way, Augustyn. No more riches, no more servants. Time to think. Somewhere I can be free, just me, alone, somewhere I can work all this out. Who knows, maybe one day I’ll come back to the world. Right now, though, I need an island, Augustyn. I need peace, Augustyn, on my own selfish terms. That’s what I think I need.” Another pause.

Augustyn remained stubbornly silent. Ammon reached again for the bottle.

“What do you think, old friend?” he asked, slurring slightly.

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Creams and greys and blacks. The interior colours of a world architected in miniature. A space no bigger than a retirement bungalow, effectively a one-bedroom apartment drifting in the Kuiper Belt. An armoured box atop a rock with a single window looking out into the void. Plastics and carbons and soft furnishings amid the hard cases and edges of screens and consoles and life-preserving machinery. In the eyes of the vessel’s sole inhabitant, the apartment

suffered one minor drawback: it had no Juliette balcony to open above a fragrantly wooded garden. He coped.

The living space had been converted from the hollow shell of a small, self-contained mining research module. The module was tethered to an ice-rock that housed much of the machinery and the cargo of life, and was, effectively, a place of voluntary confinement. Bar the essential systems and protections and storage mechanisms necessary to keep flesh and bone intact, the module had been essentially re-worked to provide an island of peace amid a maelstrom of galaxies and stars.

Ammon Mubarak lived a deliberately solitary life aboard the module. He had renamed the vessel *Bliocadran*, his personal idyll in space and time, a place where he had become a true hermit and devoted himself to a life of thought and contemplation. He was now nearly two standard years into his solitary sojourn at the heart of The Belt. Blessed as he was with self-perpetuating medical infusions and micro-machines, he remained in perfect physical condition despite the pernicious effects of long-term exposure to microgravity and radiation. He chose to keep all but the most essential systems completely offline. He lived a simple life.

During those two years of contemplation, Ammon had established a simple routine. In the days and weeks and months in between supply drops, he would sleep for seven hours, then wake and wash, to include any trimmings and shavings necessary to remain low-maintenance and hairless. He took a light breakfast of porridge and honey. There followed a regimen of light exercise, deep reading, and then an afternoon spent tapping out his thoughts and storing them in written form on the station's core data substrates. He would eat again, mixing a necessary set of vitamins and proteins and carbohydrates into something resembling a mushroom risotto. He then often just sat in darkness, staring out of the module's one window, before retiring again to sleep for seven hours.

Ammon repeated this itinerary almost every day. There had come three occasions where he was forced to vary that established routine. On the first occasion he was taken completely by surprise. Although aware that he had long ago made arrangements to ensure that there would be an automated re-supply roughly every six months during his tenure aboard *Bliocadran*, Ammon had quite forgotten about the timing of that first incoming mission. He was focussed then on a memoir, a quasi-fictional memoir about a man seeking solace on an island. A sudden cacophony of chatter from the vessel's onboard intelligence about payloads and distance and time and velocities and approach vectors, together with the chiming of proximity reminders and systems tests, even though the resupply capsule was still at least a week distant, had disturbed his train of thought with such violence that the memoir remains unfinished still.

Ammon was again caught on the hop as the second capsule approached. He had taken steps to be prepared this time, muting the warning messages and the alarms, but even the sudden visual stimulus of lights and glowing consoles and screens and panels had, with a cascade of reds and blues and greens and oranges, shredded his emerging philosophical treatise on the benefits of sustained, constructive isolation. As the resupply capsule docked and commenced its automatic stowage of goods and spares and components, Ammon watched and waited in his darkened rooms, as though a tropical storm was blowing beyond the screwed down shutters of his sea-front bungalow.

By the time of the third visitation, Ammon had been fully prepared. Some seven or eight weeks ahead of schedule he had begun to make preparations. He had quietly and methodically taken each and every console and screen and terminal apart so that he could remove the bulbs and diodes and crystals that created the visual disturbance that he so hated. He had disconnected those screens that were more modular in design, leaving just one main command screen intact. Ammon understood the difference between abject paranoia and the need for a controlled, but safe quietude. Again, he remained in a darkened space for the three days during which the capsule remained docked with the ice-rock.

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Ammon awoke from a fitful sleep. He was more convinced than ever that there was a presence with him in the deeps. True, he thought, as he lay on his back, staring into the darkness, these were the thoughts of a madman, and he comforted himself with the knowledge that the presence that he was thinking about was real. The latest resupply capsule was edging ever closer. Ammon knew himself to be truly alone aboard *Bliocadran*. Even the on-board intelligence was reduced to a functional keyboard and screen interface. Conversation between Ammon and the intelligence was purely one of a systematic nature. That was, though, still a heavy burden to bear, imposing upon the ethereal hermit interruptions and considerations mired in the squalor of the real.

Ammon rose slowly, feeling those old, Earthen weights pressing down upon his shoulders. He shook himself free of lethargy, pushed himself through the motions of cleanliness, dressed in his usual, lightweight, flight skins, and went straight to the one fully functional command terminal in the main living space. He began a conversation by selecting a command icon: 'Enable Voicom'. The intelligence aboard the research module waited in silent shadow. Ammon cleared his throat. He made a series of sounds as a means of exercising his rusty vocal chords. Eventually he paused, breathed in deeply and began to issue commands.

"Bliocadran, analysis, please. Incoming supply vessel. Designation and status."

The intelligence broadcast a vocal response, sounding uncannily similar to

Ammon's one time man-servant, Augustyn. The machine's tone was, however, too flat and matter-of-fact to be anything other than an artificial mimic of the real man.

"Mubarak Line. Deep Transport Module. Blade class, equipped with solid chemical thrust propulsion units. *ML Broadsword Eight-Two*. Call sign Beta, Alpha, Eight, Two. Systems online and effective. Vessel is operationally sound. Cargo intact."

Ammon grunted an acknowledgement. "Bliocadran, flight indicators, please."

"Velocity constant at mark zero zero one of light. Adjusted mass at three metric tonnes. Deceleration phase commences two hours. Estimated arrival at station in four days, sixteen hours and twenty-seven minutes standard."

Another grunt. Ammon broke off the conversation and made himself a glass of hot water with an added slice of reconstituted lemon. He sipped and breathed out slowly. He continued his interrogation.

"Bliocadran, *ML Broadsword* manifest, please."

"Payload total weight is one point eight metric tonnes. Forty per cent foodstuffs, thirty per cent liquids, twenty per cent spares and components, ten per cent Mubarak, Ammon, discretionary."

Ammon felt his heart rate rise as he contemplated one final question. He remained outwardly calm, but was inwardly heading towards a state of panic. Adrenaline surged. He felt compelled to ask about the presence that he felt crawling towards his island home. His voice wavered slightly.

"Bliocadran, deep scan, please. Specific assessment for life forms."

A brief moment of quiet respite. Anticipation and a sense of pressure behind his eyes. Ammon rubbed at his temples, willing the meds in his bloodstream to deal with the flash of deep tension rising within his body.

"Deep scan is negative. *ML Broadsword* is not configured for human or animal transportation."

Ammon stabbed at the on-screen icon to disable voice communication with *Bliocadran's* core operational systems. He waited a moment, staring in the general direction from which the resupply vessel was approaching. He willed himself to see the machine across a few million clicks of empty volume, and in doing so he imagined a face in a porthole staring back at him across the void. He looked more deeply into that face and saw there a stranger, a stranger intent upon a similar view, and so he saw a face full of threat.

Ammon switched on lights, wanting an end to shadows and menaces. He stood and walked back into his sleeping chamber. He looked into a mirror for long minutes, thinking through his current situation.

“It’s not as though I don’t understand all of this,” he said to his reflection, speaking softly but with determination. “I know these things. There’s a difference between being alone and feeling alone. It’s about the quality of a relationship, not about the quantity. My family and friends have never understood that, not one of them. A person can be just as alone in a marriage as he can be on a desert island. It’s about the connections that we make. For me, I suppose, it’s been about internalising that connection these last few years. That’s all. My good friend, Augustyn, he knew it.”

The face in the mirror smiled back at Ammon. He recognised it as his familiar, bleached and pale face. Those greying eyes. That constant visage.

“That’s the thing about the machines in my head. Most people who complain that they are alone are only really afraid of dying alone. I can’t die. Ergo, I am not alone.”

A flash of panic on that reflected face. Ammon thought about those words. He repeated them. “I am not alone.” He knew there and then that the incoming vessel was crewed. He knew there and then that his family would never let him be. He wondered about that for a moment longer.

“Bliocadran!” he shouted at the face in the mirror. A tilt of his head. He calmed himself and spoke more softly. “I shouldn’t have switched all those systems off. A basic security protocol, perhaps? Something that triggered a response from the family?” Ammon closed his eyes, realising that not even the machines could be trusted.

*

Over those remaining days before the *ML Broadsword* docked with *Bliocadran*, Ammon set to work. He cleared a space in the middle of the living space, collected tools and a portable interface terminal, and then methodically started to alter his one functional space suit. Specifically, Ammon removed all voice and communications subsystems, save for the most basic status displays embedded in the retinal laser projector. In effect, Ammon gave the suit the equivalent of a frontal lobotomy, converting it into a dumb machine that would manage his physical body’s needs but leave him mentally free and unencumbered.

Once the patching was done, Ammon tested the suit by establishing an oxygen cache on the dark side of the ice-rock, together with a supply of battery packs and the station’s one obvious weapon, a rivet gun designed for hard metal shell repairs. Ammon then worked out the supply vessel’s final approach vectors, likely scan fields, and approach timings so that he could practice slipping out of the station’s dark-side airlock and conceal himself from unwelcome visitors. With every run-through, as the clocks in Ammon’s mind ticked down, he became more and more agitated. He tested and half-tested and tested again. He wasted oxygen by checking venting flows. He fired rivet after rivet into the darkness

beyond the station. He infused ever-increasing doses of meds specifically designed to keep him awake and alert and on edge.

The clocks ticked on. Time grew short. The oncoming capsule breached the black horizon, implacable in its flight into visualisation. Ammon could not eat. He felt nauseous. His stomach cramped and his breathing grew fast and shallow. When the resupply capsule triggered the first proximity alert, Ammon took one last look at the command displays, climbed into his suit, and stepped into the dark-side airlock. Now or never, he thought. Now or never.

He waited for a moment before hitting a control button. His mouth moved behind his helmet's visor, as though he were reading a line in a book. He hit the button. The hiss of depressurisation. Weightless drifts. Ammon turned the manual airlock release. A heavy outer door swung open. Ammon pushed off, and at the last moment, as he reached the end of the tether securing him to the station, he made one last decision. He unclipped the carabina and let himself float out into the void. Ammon tucked his limbs up into a foetal position as he tumbled slowly away from *Bliocadran*, alone at last, alone with a final thought. He closed his eyes and saw in his mind the permanent black marker scrawl that he had left on the airlock walls.

'Then stirs the feeling infinite, so felt in solitude, where we are least alone.'

A favourite passage from a favourite poet. Advice for a son in his passage through a crowded and gaudy life. Evidence of a final madness for the medical rescue team aboard the *ML Broadsword*.



Iceheads

(Maria's Story)

FIRST IMPRESSIONS UPON WAKING: absolute and pristine cleanliness; a world devoid of harsh edges and straight lines. She drifted in and out of consciousness. Colours merged and blended through the cell-window bars created by her eyelashes. Shades of translucent grey shimmered just beyond her touch. Metallic hints. Warm, dry air. The aroma of summer?

Which summer? she thought, feeling vaguely amused. And when had she last experienced a Gaian summer, anyway? There seemed to be a void, an inky darkness now, between her and that distant heat-haze horizon. Through the haze she thought she saw petals... daisies, perhaps... no... something else, an unformed thing, and the words to describe her world remained elusive; shapes twisting on the warm breath of summer, feather-forms hanging on threads just on the fringe of her line of sight.

She sensed another thing, an undeniable variation of pressure in her ears. She grasped at one of the threads hanging at the edge of thought and found a word, found a 'hmm'. This thing in her ears was a hmm, but the recognition of that primeval expression triggered no other memories for her. She had no real idea what a hmm might be. But then, as she tried to concentrate on the shapes swimming just out of her view, the word formed a depression in her thoughts. A 'hum', that was it... a hum, and with the hum came a swelling cascade of sensations, as though a boot sequence had finished loading some basic human bios and now the complex la-di-da programmes could start their interaction with her higher brain functions. That was just how it felt. She was plugged-up, jacked-in, part of the machine. As her senses came back online she started to test herself.

Sight: she felt it to be good, better, in fact, than she remembered it could possibly have been, and the grey shimmer, that metallic hint at the periphery of her vision, was becoming clearer by the second. She was looking out from behind lace curtains at the softly lit interior of a ship. So, she was aboard a ship. That was good, she thought, assembling her sense of time and place slowly and methodically. Yes, that was a good thing. The air was warm, shifting around her ever so slightly, pumped, scrubbed, clean and fresh. The petals of the daisy had elongated, had aligned with the physical reality of walls and ceilings. They were undeniably lights, a strip of yellow running lights placed about two-thirds of the way up the grey wall.

Sound: once again, she was aware of her hearing being clear and precise. The hum that had brought her back online bore the tell-tale signature of ion thrust, mark two-one, she guessed, without quite knowing where the insight had come from. Wherever she was, the vessel that bore her was travelling fast enough to be going somewhere definite. She thought that she heard a soft whisper of breath in the background. She listened intently but all that she could hear was the ever present but distinctly friendly hum of engines and machines sustaining life in the void.

Taste: unlike her other senses, her sense of taste seemed diminished, metallic and dry, as though she were recovering from a heavy chemical medical procedure. She was thirsty, she realised. Parched. Her tongue felt swollen, filling her mouth with gelatine, a foreign body that nearly made her gag. Once again that brief flirtation with remembered humour. A night out. A morning in a now forgotten rating's crumpled bed. Embarrassed excuses from the girl. Casual nonchalance from the Chief Engineer.

Vocalisation: a croak. "Water..." Too soft to register in the real world where the hum of ion-fusion engines drowned out everything else that sounded remotely tangible. She tried again. "Water..." Louder this time, sounding like the far distant echo of a shouted devotional exultation in one of those theme park recreations of an ancient stone cathedral aisle.

Touch: she spasmed involuntarily as she realised that her wrists were firmly restrained. Legs too. Torso. Head... She bucked involuntarily, attempting to thrash her way out of her restraints, but every movement was softly but firmly pinned, a gel-like counter force applied in equal and opposite measure to her own feeble attempts to break free. Draped across her body she caught flashes of something thin and gauzy that traced her body's every contour, something that looked utterly ephemeral but that held her firmly in position.

Fear: absolute. A blinding flash. Panic. Her heart rate spiralled up into the stratosphere, totally out of control. She watched the soft walls crumble under an assault of blinding lights. She crashed and burned, the veins on her neck rippling

her skin from her very bones. Uncontrollable sobs. Voiding. The subtle pressure of a sedative administered remotely.

Relief: sweet and blessed relief.

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A whisper. Coming around again. This time the boot sequence was soft and considered, a simple emergence from hibernation, a metabolic cursor winking softly against a black screen background.

“Hello, Chief Engineer... Maria... Maria... if we may be familiar?”

A male voice. Maria swivelled her eyes around. There was no one in sight. She tried to orientate herself to the voice. The man must be standing behind her. On purpose? she wondered, as the sedative brought her sudden flight response back down onto solid ground. She felt affronted. The voice started to move towards her left hand side.

“We would like to ease the restraints, Maria, but we need to run some tests first. We really don’t want to make this any more stressful than it already is for you.”

Positive reinforcement. She recognised the inflections and emphasis on certain words. Neuro-linguistic programming. Tones and syllabic curves designed to reassure.

Stressful? Maria considered this for a moment. She had no idea why she was here. Where was here? And they had called her by a title: Chief Engineer. Maria... Maria... Was that her name? Everything seemed so decidedly dislocated. She let the words trip through her brain. They felt instinctively right, but as yet, without a clear definition.

“We can let you drink a little water once you’re out of restraint mode. Will you work with us, Maria? Please try.” A soft tone, darkening. “And it’s worth bearing in mind that the restraint suit can deal with anything untoward. So, really, it’s best all round if you bear with it, with us, that is, for a little while longer.”

Maria was nothing if not a realist. So much seemed to be blocked out, as if a tall and darkly shaded wall separated her from her natural and true self, and yet the here and now seemed so clear and precise, so fast, so bright. What, she thought, did she have to lose?

“Yes,” she croaked. “All right. Whatever you say.”

As soon as she spoke the words, she felt the light restraining pressure previously applied all over her body start to relax and then fade away. She flexed her fingers, feeling them move freely. She raised her head a little and saw herself lying on a med-couch in a grey, figure hugging bodysuit. She felt slightly embarrassed, instinctively moving her hands to cover her breasts, and in that instant the suit billowed outwards, becoming all together more modest in its

form of restraint. Maria raised herself slowly up to a sitting position, pulling her legs in underneath her bottom so that she sat cross-legged on the couch. The grey bodysuit morphed into a looser fitting shift that hung loosely from her shoulders and spilled across her folded legs. She felt dizzy.

Moving to her right and left were the male and now a female, equally shrouded in grey gossamer modesty. The male was a solid form, six-foot tall, bald, and... she stopped thinking. Her mouth worked involuntarily for a moment.

“Ice... Icehead...” She sounded like a small child. The word meant something, but she still could not make it take its proper shape in this brave new world. Nonetheless Maria Gonzales recoiled instinctively from the creatures standing to either side of her bed.

The man was first to speak.

“My name is Aaron and this is Giulia. I am an Analyst Without Portfolio, Liaison Chapter. Giulia is First Developer, Contact Squad, Engineering Chapter. We are both members of the Coherence Tribe. We are what is known here as a programmed pair.”

He sounded completely matter-of-fact about the explanation, as if it was just another banal introduction at a tedious naval cocktail party instead of a conversation between captor and captive aboard a fighting ship out at the edge of known Sol space. The female, Giulia, stood quietly to Maria’s right hand side, watching her new charge quite impassively.

“And yes,” Aaron continued, “we are Apparat. We prefer to be thought of as people, plain and simple. It’s not as though we’re... unrelated. Monkey hands, just like you...” He smiled at Giulia from where he now sat at the foot of the bed as he waved his hands in front of Maria. Giulia moved to sit next to Aaron on a bench at the foot of the med-couch, still staring intently at Maria. Aaron turned to look at Giulia and the female watcher nodded, stood up again, walked over to an automated server, opened a hatch and then returned to the couch. She handed Maria a beaker full of cold, fresh water. Maria sipped the first mouthful, fell instantly in love with the brightness of the idea and gulped down the rest of it, spilling liquid life down her chin in rivulets of simple joy. She held the beaker out as soon as the last drops fell from her chin, demanding more. Giulia obliged, but this time Maria held the beaker in her hand, savouring the freshness of the moment, before turning to look directly at Aaron.

“I can’t... can’t put my finger on it,” she said softly, still horrified by the nature of the man sitting in front of her, but aware that she was already starting to accept the difference, the augmentation. “Something’s different. Can’t remember anything. Don’t know anything. I’m sure there should be something, some history...” Her voice trailed off as she momentarily lost her train of thought.

Sitting again on the bench at the foot of the med-couch, Giulia resumed her silent vigil. Maria took a moment to return the woman's stare. Giulia was thin, almost bony, but darkly tanned. She looked well, although in need of a good meal. Her hair was bob cut, and jet black. She showed no sign of obvious augmentation. Her face was childishly soft but she had deep brown eyes that could melt granite.

Aaron inclined his head to one side. "Yes. Of course, there should be some history. There is. One or two protocols to run through first, though. You've already noticed my... additions, as it were."

He seemed to find the vocalisation oddly amusing.

"Yes," Maria replied, nodding. "You, but not her. Why is that? Does she speak, by the way? This is totally fucking weird. I should be screaming blue murder..."

"Not very often. Giulia doesn't need to vocalise, really. The reason that everything seems so woolly is because of the mild sedative we're using. Nothing to worry about. Just a precaution. The suit is managing the doses, trying to protect you. That's a good sign. Symbiotic compatibility."

Maria took another sip of water. "But you are going to explain, aren't you." It was a command, not a question.

Aaron took a deep breath. Giulia shifted next to him on the bench, leaning forward in absolute concentration, and for the first time, now that she could look directly into the woman's eyes, Maria realised that she was being scanned. That single word, Iceheads, came to mind again. Maybe... just maybe, it seemed to Maria, that her thoughts were beginning to crystallise.

"Very well," said Aaron, standing, with his arms behind his back. He looked like he was about to begin a school assembly address. "I'm going to tell you a few bits and bobs. Then we'll remove the mental blocks. I think you've already realised that we're controlling aspects of your memory. As I've intimated, it's for your protection... Anyway, some basics. You are Maria Gonzalez, late of the Dirigiste vessel K-47, a Hunter-Killer commanded by Jürgen Heidfeld. You were the ship's Chief Engineer. Your ship engaged one of our decoy fleets, Kuiper Belt, Ceres Sector. Quite a stunning manoeuvre, in fact, but all in vain, I'm afraid. Our response was highly effective. We believe that a number of lifeboats launched before your self-destruct sequence completed but we left them to their own devices. We tracked you. We wanted you alone to join us, Maria. We wanted you, specifically."

Although she still had limited direct access to her personal memories, Maria felt that she was starting to piece together some of the more immediate basics from Aaron's initial explanation. She was catching fleeting glimpses from some of her more generic memories too. Maria understood that she had been or was still

clearly some sort of naval officer. She had to assume that her basic training would kick in at some point. She was sure that she could feel some core instinctive otherness shouting at her from the far side of her psychological firewall. A thought popped into her head. Give nothing away. Name, rank and serial number. She laughed softly.

Aaron paused for a moment, but then continued with his description of recent events.

“You’ve been on board the *Make My Day, Punk* for a little over four standard weeks. This is an Apparat Destroyer, Brutal Realism Class. Looks old. Designed to. Very aggressively retro. Steam-punk on steroids, if I may refer back to a phrase used in happier days for our species. Harry, as the ship prefers to be known, packs state of the art tech, though. All part of the new directive. Anyway, I’m drifting off subject. As I said earlier, we wanted you alive and sane. We’ve not touched you, by the way. You’re still absolutely human. Moot point, of course. We don’t consider ourselves anything other than human. Just... a little improved. Your propaganda people can be quite cruel at times, you know.”

Maria was starting to feel quite uncomfortable. The woman, this Giulia, this Chapter Engineer, never seemed to blink. She just sat next to Aaron, watching over their charge as the conversation jerked and jogged along. Maria was sure now that every bit of her was being recorded and analysed. It seemed to Maria that, for Giulia, she was nothing more than a temporarily fascinating data set. Maria sat on the med-couch, cross-legged, sipping her beaker of water. She willed herself into a state of tranquillity. She too could be an impassive bitch when she had to be, at least outwardly.

Aaron continued the reveal. “The point is, Maria, in order for you to interact with us effectively we need to... improve your natural abilities. Think of it as a gift, whatever the outcome of our future conversations. That’s why you’ve been asleep for a while. We’ve fixed a design flaw, as it were, just a little DNA tweak to improve your natural processing. A little nano-med tinkering. Think of it like a neural upgrade. Most of it is dormant right now, but we’ll open everything up shortly. You might need a bit of support during the process, but once all that’s done with, we’ll want to make you an offer.”

“One that I can’t refuse, I suppose.”

“No, no, you can refuse us if you want to. We have your lifeboat in one of our holds. It will be as simple as apple pie to strap you back in and leave you and Lady Luck to waltz across the heavens. All I ask is that you let the changes work for a while, let the many worlds that we can show you unfold, and then we’ll talk again.”

Maria smiled benignly at the Iceheads sitting in front of her. She needed to buy time. She needed to think. She felt absolutely, totally dumb, and without the core

stack of her memories it seemed she had few options right now. Without references, without the historical patchwork that made up a person's hinterland, she felt new-born, infantile, virginal, unbaptised. She wanted her past back so that she could stop being just a name. A strange thought occurred to her: she was a blank canvas, old and tattered and worthless without the colour of her past oils daubed and splashed all over it. Where, she wondered, had that come from? She needed time. She had to play along.

"So, what happens now?" she asked quietly.

"Nothing much, really. We'll leave you alone for a while. The ship AI will judge when and how to start lowering the barriers. As I said, it might be a bit rough for a while, but please, please don't think too ill of us. It's just the way it has to be. We might be frightfully clever at this sort of thing but we've not quite ironed out all of the wrinkles." Aaron sounded almost apologetic.

Maria looked at the pair quizzically for a moment, and then shrugged her shoulders. That ranting inner self, the one locked away beyond the genetic demilitarised zone, poured out a stream of silent invective, but Maria surmised that a combination of recent trauma and suitably tailored drugs were combining to keep her physical self-operating as a passive vessel. She shrugged her mental shoulders.

Aaron and Giulia stood up. Aaron watched Giulia leave the room as quietly as she had existed within it, before turning back to look directly at Maria Gonzales. He walked to Maria's left hand side and took her hand in his. He squeezed her hand gently before laying it back in her lap and patting it twice. He looked into her eyes and smiled as he said, "Welcome home, Maria, welcome home." Aaron held her hand for a moment longer and then he too turned away and started to walk towards the door.

Maria watched the Icehead leave the room. He did not look back. As the pressure door clicked shut she continued to sit on the med-couch, cross-legged, waiting now, with a sense of increasing frustration, for that ultimate revelation.

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Universal time is understood to be predominantly serial in nature and necessarily finite, but as a concept Maria felt that her universal time was sheer and endless. She was an eternal being, a single entity, divorced from the coil and trailing the shattered chains that bound those of mortal heritage to rock and atom. How best could she describe the feeling, Maria wondered? Words floated through her like ghost ships across a fired horizon. Would words like interminable or excruciating cover the immensity of what she was experiencing? She felt as though she were drifting on a salt sea, floating unaided, bobbing across a temporal swell, beyond reach of any one of her common senses, with a quadrillion kilometres to shore in any given direction. This was the calm that

comes with the leading edge at the eye of the storm, her place of never-ending helplessness, a sea of solitude where waves curled and threatened but never quite crashed over her head to drag her down and drown her.

Her skin tingled once more and she imagined thousands of tiny fish nibbling at the sagging and wrinkled flesh hanging in folds from her fingers and toes. That stickleback feeling was almost a welcome relief, a reminder that she was, indeed, skin and bone and cholesterol-clogged arteries. Above her head she watched a diver, a skua, perhaps, silhouetted against a dull, grey sky, pinpoint her face with a beady black gaze, sweep back its wings and aim its hungry beak for her water-sodden eyes.

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Maria Gonzalez prayed for sleep. She begged for the end of all days. The endless fires of a thousand Hells would have brought her such sweet relief. These quiet, these oases of calm amid her mental storms were a torture all of their own. Maria existed in a purgatory, fit to rival any of the old ways, any of those half-remembered pits wrought deep and dark by a collective sense of Roman morality, in spite of centuries of Dirigiste agnosticism. She was clearly a deep sinner, like ancient grandmother, like mother, like daughter.

She counted the ticking of her body clock, marking the seconds of respite like notches on a fire-blackened bed post, and always the marks diminished by one every time that she surfaced from the nightmare into the seemingly calm air. She had their pattern in her mind now. She lived with the agony. She saw her own suffering through skua-pecked eyes. She heard their voices, their screaming voices by the thousand, and she felt the ever-deeper probing of minds other than her own.

Time. Time was the nightmare of the moment, dragging her wretched body through the grinding cogs of some weird mechanical process. Maria could feel the voices rising before she heard them. They were indefatigable. They were coming again. She screwed up a sweat stained cotton sheet, clutching it for dear life in her red-raw hands.

*

It wasn't even that it hurt any more. Maria Gonzalez twisted and turned as she lay on her bed in her softly lit chamber, keeping sway with the surging voices in her head, rather like a piece of sun-baked driftwood on an incoming tide. The pain that she felt was imaginary, almost sympathetic. She thought that she ought to feel the worst of it, and so her body reacted accordingly, but she was coming to realise that she was, in fact, whole again.

She could hear distinct words now and then, and accents and tones. Some were definitely, embracingly female, others full of bass hollows and male richness,

while still others were laced with that slight buzz of the artificial. As the voices built to another crescendo, as streams and rivers and curling swells of meaning threatened to overwhelm her, as she bit down hard on her lip, drawing blood again from a week-old wound, she started to whimper. She spoke their words out loud. She pulled taut the blanket wrapped around her wrists, but as she started to succumb to the threat of suffocation under their weight so those same voices calmed and ebbed, and in that ebbing she felt data flow into her mind, an ever-present undertow.

And she knew things now. The data streaming into her head lodged in new patterns, building structures and vaults and deep wells. She knew instinctively that she was changed. She knew implicitly that she was genetically rewired. She knew absolutely how she was supposed to filter and block and manage the cacophony in her head, even if the practical application of her new skills was still somewhat lacking. It was, she knew, just a matter of time. She was a child learning to speak.

One voice in particular came to her again and again, hovering around the fringes of the tidal surges. At first that one voice was nothing more than a drop in the Apparat vocal ocean, but it was a drop falling repeatedly into her head. That voice spoke softly, liltingly, with care, almost like a mother's lullaby.

"Nearly there, Maria, nearly... Soon, my love... I can hear you, I can feel you, darling – don't worry, don't worry... I'm Giulia, a silent little girl in the void... I am the first, my darling... Together we are beacons in the dark night... together we are... death..."

Maria felt that last wave crash onto shore, and with it she found herself lying prone on her pebble bed, damp with sea-sweat. The roar of the sea, that sea of voices, was now nothing more than a soft tidal rhythm breaking behind her. She most definitely knew of so many things now. She knew that these voices would forever be with her and she was happy, so very happy. All of her life she had been fascinated by machines. She had always loved to tinker, and now someone had given her the perfect little construction set. She smiled sweetly, closed her eyes and whispered to no one in particular as she drifted down into simple, unaffected sleep, "Love you too, darling. So glad... so..."



Splendid Cities

(Catarina's Story)

IT'S A FUNNY THING, the repeated playback of a once-upon-a-time conversation in your head. Right now, we're talking years after the event. Part of me doubts that anything substantially realistic remains fixed in my memory. There have been too many years and too many beers and too many tears flowing where once bridges used to stand before they got swept away during my repeated attempts to reconstruct her life. Another part of me keeps the faith, though. Undimmed. So, for this one last time, the storytelling is on the record. There might be a page or two missing from the book, the covers are undoubtedly torn and scribbled over, and there might be a redacted line here and there, but the bulk of the words remain as originally transcribed. I guess a truth might lie somewhere in the mix.

I do not say 'truth' with any emphasis. I will not proselytise about any singular knowing of history or of any definite thing. Transcription, in and of itself, is necessarily an interpretation. We choose the language, we select a word, and all of these things are based in our own bias. A phrase, in my mind, has a clear and particular meaning. I cannot say that this is true for you. My recollection of Catarina's words seems accurate but I have no way of really knowing such things anymore. I'm telling a truth. My truth. It's a different truth. I'm not even sure whether I still believe all of it in these twilight days, but you've got to hold onto something, even if it's a ghost. This is what I have chosen to take with me. This is what I have chosen to upload. This is my testament. This is my moment to bow out.

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We had a habit, Catarina and I, of putting on our million-dollar-baby suits and going out for a walk. Sounds idyllic. Some sort of dusky Riviera stroll, hands clasped, bodies toned and tanned, designer sunglasses perched on designer noses, looking for the perfectly chilled Pinot. The bit about sunglasses wasn't so far from the truth, but you couldn't take a seafront promenade along Hispanica's roasting shores. Our taking of a walk, sunny side up, was more like an expedition. I guess I owe you a short explanation, although I don't see the point in getting too technical. That science shit gets tedious, and it's Catarina that I really want to talk about, but here goes with some hardware junk.

I should have said that we couldn't take a walk on El Nuevo Escorial, rather than the collective term, Hispanica. El Escorial was a mining station, basically a giant Hoover, sucking up molten rock to extract core silicates and irons and some of the rarer base elements. El Escorial is one part of a minerals collective, the complete station named Hispanica. The station is a network of cloud-mines named after ancient palaces, all of them hanging on the bright side of an Earth analogue by the name of Gliese 876 d. We miners preferred to call this particular molten rock The Bitch. Hot as hell. Mean with it. An average surface temperature around three-hundred and forty degrees Celsius with a solar orbit of around one-hundred and twenty-four days. The Bitch orbits Gliese 876, a red dwarf in Aquarius, also given a colloquially affectionate name. That name is The Bastard, on account of our close orbit and the fact that you burn in hell the moment you see naked sunlight. We lived in anything but the Goldilocks zone. Our porridge was always way, way too hot.

Anyway, all of this begs an obvious question. How do you go for a walk on The Bitch when The Bastard is burning at full ferocity right above your head and turning the surface of the planet into a molten silicon sea? There are three parts to the answer. First off, you make sure that the monumental reflective parabola that sits atop the network of mines is constantly aimed directly at The Bastard. Pretty fundamental. You want to be in the shade. Second, you make sure that you're in a Calming. Basically, the shield creates about a hundred square kilometres of marginally cooler atmosphere around the mines. That creates atmospheric eddies and vortices. Most of the time the cloud-mines are buffeted to hell and back, but every so often the winds and the thermals combine and create a downwards shift towards weather that's almost benign. So, you wait and you wait and eventually you get a shady calm. Third, you make sure your gold-coated suit's cryo-unit is in tip-top condition. If the cryo unit fails you don't make it back inside the station. You are, briefly, before you evaporate inside the suit, a boil-in-the bag meal for one. Leisure strolls outside El Escorial were not, as it happened, generally seen as a popular pastime.

There were rules on-board a mine station. Loads of rules. The collective was operated by Mineria de Roca Caliente Pty (MiRC), who had a downer on pretty

much anything and everything that might bring a ray of non-lethal sunshine into our otherwise tedious and risky lives. Sure, the contracted day-rate looked good, but by the time you'd paid the company for transport, food, water, heat, light... Well, the deal was done and the take-home was never quite enough to retire on. Most people did a tour or two in the way-deeps like Gliese and called it a day. Most people. As for the rules? Necessarily boring, life-saving health and safety shit for the most part, and we broke most all of them, including the fraternisation no-nos.

Catarina and I had flown in on the same transport. I was a wide-eyed kid of twenty-two standard years, born out in the deeps, a long and lanky product of low gravity environments, corpse-pale under a shock of thick, curly, mousey-brown hair. I had this idea in my head: El Nuevo Escorial was going to be my right of passage, was going to be my step out of the familial shadows and into, quite literally, bright red sunlight. Catarina, on the other hand, was a cynic. When she hustled into the seat next to mine, all biceps, military fatigues and kit bags, my first thought was, "Oh shit, not her, not next to me... Oh shit..."

At first sight, Catarina looked positively masculine and weirdly antediluvian to me. She was nearly forty years old, her upper body thick with wire and muscle. She wore her hair close cropped in grey-flecked blondes, and sported a scar above her left eyebrow. We sat next to each other in the grunt bay on the transport. She bought me Blue Kicks and told me horror stories. This would be her sixth tour, all of them deep and nasty, and her second on El Nuevo Escorial. As we drank, so time's floodwaters receded and I started to see a very different person. It was a heady cocktail. Take one wide-eyed innocent vessel, pour in a substantial measure of blue-eyed, wickedly grinning sours, drizzle in some pretty obvious flirting sweets, and what do you get? Lust at first taste.

That's where it should have ended. A brief moment, snatched in a dark corner, out of sight of MiRC's closed circuit videos. A notch on a bulkhead. A tale to tell the boys on shift by way of pretending to be a man. Somehow things never quite work on such simple levels. We hit our bunks and our shifts. I learned most things the hard way. I broke a wrist and then, almost immediately the medics fixed that little mishap, I took a guide bolt through my left thigh in a steam squall. Six months of hard medicinals and hard labour, broken into manageable chunks by the thought of the next free night in the station bar, sitting with Catarina, both of us breaking company rules, both of us mad and bright-eyed and bushy tailed. Catarina was my first true love.

If I'm honest, we didn't do much talking on that first tour together. We didn't go for walks and we didn't wander off into flights of fancy or philosophy. We spun a really basic cycle. Work. Drink. Fuck. Work. Drink. Spend a week in the infirmary (me, of course). Drink more. Fuck. Work... You get the picture. Primeval. Ignorant worker bees going through the motions. Pheromones and

alcohol, the soma of the mining masses. That first tour was a full five rotations, the best part of two standard Sol years. I graduated as another member of the hard-bitten cynical school of mining, in spite of my natural inclinations towards extermination through stupidity. Through it all, Catarina was, basically, just Catarina. Solid. Phlegmatic. Beautiful. Practical. Driven.

After a five-rotation stint, you got a minimum three-month furlough. I went home for the last ever time. Said my goodbyes within a week. Needless to say, we both signed up for another tour as soon as protocols allowed. I had no idea back then about Catarina Gutierrez, the thinker. I just wanted my shag-buddy back. I had a severe case of the Catarina virus, and I had absolutely no concept of the choices that a forty-year old woman might want to make. As a now only slightly less innocent twenty-four year old, I had no idea that I was becoming a fundamental part of that choice.

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I guess we need a little more context here. As I'm dictating all of this, I'm looking in a mirror. I want to check out my own eyes as I speak, sort of like a truth indicator. What I see – and informed by that visual, what I subsequently hear – is a decrepit remnant of something once vital. Rheumy eyes. Bloodshot. Bald as an egg. Wrinkled and arthritic and jowly. I mentioned bowing out earlier. I mentioned an upload. This narrative is a part of that upload. This is a storytelling, but it's just one small part of something much bigger. This story is an outlier. This story is by way of a Prologue. This story is a tease...

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Cat and I pretty much blew the whole boy-girl thing our first week back on El Escorial. She wanted to talk. I mean, since when? I just didn't get her shift. I got all moody and bluff and tore myself in two trying to prove something stupid for a full quarter rotation. It all ended in one hell of a row. A dumb and immature boy. A mature and sorted woman with a nagging question to ask. Our lovemaking drifted off. I spent time brooding, uncommunicative, and got what I deserved. A break. A chance to work out whether I wanted to grow up. Needless to say, I went off in my own petulant and childish way.

We managed to avoid each other for about a standard month, but then Cat and I met one night in the station bar, both of us boozed and feeling sorry for ourselves, me on account of another sordid negative, her on account of a dose from a sleazeball motorman. Thirty-one days of being mutually miserable. I got shit-faced angry because she'd betrayed me. Cat slapped me for being an idiot. We drank ourselves stupid on Blue Kick sours and then, obviously and ironically, we actually talked after we had that monumental making-up shag.

That was the night that Cat first told me about the shade walks; about how, when she was on her first tour, an older rigger had got both he, her and a pal royally

drunk, and persuaded them all that low gravity, sunny-side-down was a great idea. Cat didn't remember much about the logistics, but she was hooked the moment she went on her first, shady-side parabola walk. I did the glass-half-empty thing and went through all of the obstacles and the dangers. Cat just pinned me to the bed and said, looking at me all the while with her piercingly bright blue eyes, that life was about challenges and not about problems. Catarina was a *carpe diem* sort of girl. We managed to add some God shit to the conversation, followed by a more generic discussion about spotty, lanky kids and about why the hell she, a beautiful, sorted and worldly woman, should bother with them. I understood then that the case was closed and shut. Lust at first taste had broken on the rocks of love and soul and faith. I believed in Catarina Gutierrez, heart, mind, body and soul. It was as simple as that.

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Our third tour. We'd pretty much commandeered the whole million-dollar-baby market. Through a friend of a friend we acquired our own fifth-hand suits from station surplus. We spent a solid spell grubbing up supplies and a fresh coat of bonded reflector patching. Catarina showed me how to mix and match and mend and make good, with every repair one hair's breadth away from roasting my soul. It took nearly sixty standard days, half a rotation, but we ended up with our own suits set up in an obscure top-side airlock. With a nifty bit of system hacking we could draw power to charge systems and mag boots, and put good clean air into the suit tanks. Another credit-friendly tech kept an eye on the cryo set-ups. It takes a while to get the naive shit out of a twenty-something boy, so I kept a less than friendly eye on the friendly tech.

When the local weather died down, we'd get maybe a twelve-hour window. Allowing for shifts, and for the hour or so to suit and boot, we might only get a twenty-minute stroll around one of the camera and sensor dead-zones on the underside of the parabola. If everything aligned and the Gods smiled, then we might get a few hours where we could yomp underside and get close to the coronal edge. Those were the best walks. Hand in hand. Our Riviera stroll. And if we got a few minutes to stand and stare and feel the heat curves out by the parabola's edge, we would talk about the stars and the Gods and the sheer impossibility of understanding any of that shit.

There was clearly method in Catarina's madness. Outside, out in the heat and the static, we were effectively off-grid. There was one particular conversation that kicked off towards the end of that third tour.

"There's this thing I read," she said as we stood on the underside of the parabola, watching yellows and reds and oranges burn across our reflective helmet visors. Atmospheric status data dripped down at the extreme edges of the head-up display. Tolerances. Red, amber, green. It was an amber day out there. Catarina

sounded a little thin and husky on suit-comms.

“Something old,” she continued. “Just a quote, really, but it stuck with me. I forget the writer, Keller or something like that. Goes like this: If Jesus really did rise from the dead, then you’ve got to pretty much take on board everything he said. If he didn’t rise from the dead, then who needs to worry about that shit? That’s the thing everyone misses. It all hangs on whether he actually rose from the dead.”

I turned to look at Catarina, although my suit and helmet remained oriented pretty much as they had been. “That’s getting in way too deep, Cat,” I said. “Simply too deep. I’ve got my mind on those pretty lights and what we’re going to do when we get back bar-side. More like screwing your arse off...”

I heard Catarina laugh, and felt a faint squeeze of my gloved left hand. “That too,” she said softly, “but it’s a real thing, Sweetie. I mean, what if we get ill, or old, or we don’t get old? They’ve got all that anti-ageing stuff now, ways to keep you young for longer, but there’s always a day going to come.”

Catarina paused, gathering her thoughts. I stood there dumbly. She continued. “It’s like the man said: did he rise from the dead? I’ve got enough saved to do a serious regen, but that just puts things off. And there’s no accounting for accidents. How much gene-tech would fix a spike through the head or the parabola giving up on our particular ghosts? That’s the thing that’s bugging me. I don’t want to rise from the dead, Sweetie, ‘cos I don’t want to die in the first place.”

A flash of red on the head-up display. A weather shift. We both registered the warning. A heat squall heading up from the surface, south-westerly. The front would hit our exact spot in forty minutes.

“Think we should park this one?” I asked, reverting to glass-half-empty mode.

Catarina continued to watch the dancing lights at the parabola’s edge. “Sure. In a minute, We’ve got a little while yet.” Catarina turned to face me square on. I mirrored her movement. We could see gold-hued reflections of our own faces in each other’s visors. Cat’s video face appeared bottom left on my head up display. “Seriously, though,” she said quietly, “the universe is like constant motion. Everything is about complexity. Entropy, they call it, and it’s what we are. No matter how much of the good shit we pump into our bodies, there’s only ever going to be decay. We’ll put things off for a bit but eventually we’ll fragment. We’ll go bang one day, Sweetie. All of us. We’ll return to the universal soup. That’s what all the God stuff is about. A way of explaining why, when all any of us has really got to look forward to is being reduced and shattered and split apart. That’s what faith is. It’s a way of holding on. People who believe that God is on their side get all that truth and certainty. Give or take a sermon or two, it all ends up with praise be the soldiers of the faith.”

Cat was deep into a seriously serious shit current. I just stood there dumbly, feeling the micro shifts in my suit's cryo-unit output as the local atmosphere started to heat up ahead of the approaching weather spike. I wanted to pull away from Cat and lead her back towards the airlock. Both the looming shift in the weather and the look of intensity written across Cat's on-screen features were freaking me out. Cat held me firm, though.

"It's fear, Carl. That's why we get all weird with each other. You realise that you're mortal. I mean, maybe *you* don't, not yet, but you will. I did. That first tour we were together. I looked up into your eyes one time as we were making love, and I knew, Carl. I just knew. And I got scared. I got scared that I'd love you and grow old and no matter how much I loved you it could never be enough. You'd get bored. You'd stop loving me."

Cat's grip tightened. I could feel the pressure she was exerting through the skin of my suit. The head-up display pinged a five-minute increment on the weather warning. Cat would not let the subject go. It seemed clear to me, despite my rising sense of unease, that I should have faith in her in this moment. She had, I believed, just told me that she loved me. I calmed my breathing and asked her to go on, trying to sound calm and matter-of-fact.

"Okay, Sweetie. It's all a bit confused, but here goes. You see, it's in that moment, when you're laid bare like that, it's right there and then when you know death is hidden in every one of us. Whatever we choose to do, fate and hope and choice are illusions. The moment we become flesh and blood we start to fill and stretch and swell with death. You get to see it in the people around you, like when you got that bolt through your leg. It makes my skin feel tight on my bones.

"So we tell each other lies. We believe we'll live forever. That's what does the harm, Carl. That's our haunting. We're all sleepwalking towards the last house on the left – the derelict clapperboard. It's where I lie and wake in the morning, feeling the chill of the void on my lips, feeling the breath of ghosts on my cheek. But..."

Catarina stopped. I heard her catch her breath. On screen I could see a tear tracing down her helmeted cheek. I pulled her towards me and we embraced in a clumsy, robotic fumble. The head-up display pinged another five-minute warning. The alarm tone was an octave higher. Still we stayed in that awkward embrace.

Catarina whispered now. "Doesn't have to be like that, though Carl. Doesn't have to be. Not for me. Not now, Sweetie."

I took a step back, still holding both of Catarina's gloved hands. "I'm not sure I follow you," I said. "I love you, Cat. That's all that matters. Old and wrinkled, who cares? Let's grow old disgracefully. Let's regen together. Let's do it all,

man, only not out here. We've got to get inside, Cat." I tried to lead her away from the parabola's flaring edge.

"Hold me," she said urgently, drawing me back towards her. "Just hold me, Carl. I'll need you to hold me. Hold onto me. Keep holding onto me, onto the idea of me."

Locked in our blimp-like embrace again, I felt totally lost. "I'll always hold you, Cat, my darling. You're my girl," I whispered. I wrapped my arms as far and as hard around her as I could.

"That's good," she said softly, "because I've got to leave you, Honey. One day soon. I'm sorry. So sorry, my love. Seems I've spent too much time out here. The radiation and the shit food, all that shite synth booze, and the incurable..." She caught her breath and stifled a sob. "No amount of chemicals or genetics or machines gonna help me. Too far gone..."

We spent two days in the bar. How else do you get over the shock? Nothing should have been incurable in our damned day and age, but there we were, facing down Cat's descent into the universal, particulate soup. We got drunk. We smoked like there was no tomorrow. We held each other and slowly worked out how to tell our friends. We turned the wheels through anger, frustration, bewilderment and loss. We promised each other that we'd be strong. I fell apart a little more each time I said something positive. I worked out how many credits we'd need for the best private medics. Cat held my hand and told me firmly but softly that we'd do no such thing. She had a way out. She told me, after a second day on the sours, that she had a way out for both of us.

She told me that her part in the living game was nearly done, but she was a long way from being totally down and out. It would be up to me to see the living game out for a while longer after she had gone, but it would not be forever. Nothing was forever. Catarina Gutierrez was way ahead of me in the Entropy Game.

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We had spent the previous tours aboard El Nuevo Escorial keeping our sunnyside walks as much of a secret from MiRC executives and from the mining crews as was humanly possible in such a restricted environment. For our last walk together we planned something a little different. It took us a couple of standard weeks to fit Catarina's suit out with the right data links and with a neural lattice embedded in her helmet. That alone took a hefty slice of my banked credits. The friendly tech who I kept an unfriendly eye on was a smart cookie and he'd upped his price for under-the-counter hardware and its fitting. The aim of the tech work was simple: we were going to take our last walk of the tour in full public view, broadcasting on the station network with a direct satellite uplink to the wider public nets. Cat and I were going to be the stars of

our own, hijacked public broadcast. For added measure, my suit was rigged up with a local storage array so that everything could be recorded as a backup, just in case the powers that be tried to shut out the feeds. To go truly viral you needed to be seen sticking it to the man.

We started the broadcast in the airlock. We were suited and booted, with a solid four-hour weather window. Triggering the outer airlock door also activated a command sequence on a hacked network port, one little gateway configured as a dedicated, high bandwidth data pipe through the station's firewalls and security protocols. We had a multi-phased lockout around the data pipe and our friendly tech had figured we would get about twenty-five minutes of uninterrupted feed before Escorial security broke our network encryption and closed the port out.

The airlock door opened. Cat stepped out onto a walkway that twisted through one-hundred and eighty degrees so that we could walk down to the underside of the station's protective parabola. As she stepped out, so I watched her on a visual at the bottom right of my head-up display showing a live stream of her progress. Sound and vision. Linked personal and suit telemetry. A complete picture of her individual journey and of her vital statistics. As I stepped out into the atmosphere behind her, my mag boots latching onto the metal walkway, I used my suit's headcams to provide a third-person feed while Cat kept up a running commentary.

"Hi everyone. My name is Catarina Gutierrez." She turned to pan her own headcams in my direction. "And the poor fool behind me, who is streaming footage of our walk on Free Channel ninety-six, is Carles Espina." She waved at me and I saw the move a split second later on my stream. The airlock door closed behind me. We walked on, Cat talking all the while.

"First things first. We have a short window. Right now there are a hundred security algorithms working to close these feeds down. By the time people get suited or get a flyer out here we should be done and dusted, so I'd sit back and watch the show for as long as you can. We'll do our best."

Cat had reached the underside of the parabola, on the short haul out to Escorial's local edge. Her headcam feed filled with yellows and reds and blues and dancing browns. My own feed showed Cat's golden suit silhouetted against those same dancing shades of fire and heat.

"Shall we begin?" Cat asked. "You see, it turns out that mining really is bad for you. Eight tours for me. I've spent most of my adult life out here shielded by reflectors and metals and weak fields. Radiation is a kicker. Chewed my cells up to a point where there's no fixing them. Even regeneration would just amplify the residual mutations. So, I am a terminal case, and that got me thinking. Wouldn't it be sort of cool to go out with a bang? Wouldn't it be cool to record the whole thing, film, neurals, life itself on the burn-out. One last flare?"

Cat was striding out across the parabola's surface, swinging her legs over superstructure spars in the planet's low gravitational field, leaving me in her wake as a slightly wobbly amateur cameraman. I had to zoom in to keep her in full shot. I could hear my own laboured breathing, and momentarily wondered whether it would impair the broadcast audio before remembering that Cat's audio feed was on a closed loop.

“But then, Carl and I got talking in the bar, as many of you know we do, and we decided that we want to live forever. Like Gods. Only better than Gods. It's not about regen. It's not about repairing cells for a spell while you wait for the inevitable accident or war or, as I've found, one too many diseased cells. What you're about to see is something very different to all that.”

Cat turned to face me, still stepping slowly backwards, and blew me a kiss. She punched a command in on her suit's arm pad, and the suit control system took over from Cat in terms of mobility and direction. The suit set out on a course directly towards the closest parabola edge. Using inbuilt servos and motors, the suit set out at a steady jog. I started to stumble, tears tracking down my cheeks as I watched Cat's suit power her away from me.

“That's right, my lovelies. I'm going to get myself a really crisp tan. While the suit and the boots do the walking I'd like to pose one last thought. Have you heard of Splendid Cities? A lot of you have. A lot of you have game avatars. A little virtual reality helps with the spaceman blues. But, did you know that you can upload directly into the game? It's not the sci-fi schlick. There's no download into another body. Just your memories, simulated feelings, an autonomous copy of you that lives in the game.

“There are some upsides. Galactic blockchain, for example. There'll be millions of copies of me, so no plagues, no bullets, none of that shit will ever get all of me. If the power goes out for humanity then who'll care? Until then, I get to play and reboot and play for as long as the game exists. I'm pretty certain, with millions of copies knocking around the stars, you'll be able to find me – well, an autonomous simulation of me, somewhere out there.

“And the thing is, you might think endless reboots and soulless digits will be hell with bells on, and it might very well be, but I'll be a digital version of something close to me, feelings and memories and thoughts, and I'll be a contributor to the game's living code. Unlike now, there'll be no fucked up body, no single point of failure.”

Cat barely paused for breath. With every step taken by her suit, she moved ever closer to physical oblivion, and she still had to trigger her upload. “And what about the cost? Sure, playing takes credits and your sim chews through lives that you gotta earn to buy. But that's about VR and storage and bandwidth. The network wants true human entities embedded in real time. We're different to the

game AIs and VR sims. We're valuable. Coming in from the real gets you one hell of a discount when you're ready. It's the future, boys and girls. It's my future. Sure as hell don't have one beyond a few weeks as I am."

I recall the tears flowing at this point. I remember dropping to my knees, staring after Cat as she headed out into sunfires. I couldn't make out the streams on screen anymore and my nose was running as I cried. You can't wipe in a suit. I didn't care anymore. I called out Cat's name again and again as she walked on. I felt hollowed out, staying alive only because of the knowledge that I was recording everything now. The sound of her recorded voice, and a short run of digital footage, it was something to hold onto, no matter how thin I felt.

Cat finished her spiel with a network address and a promise that she would meet game players in person in the afterlife, deep in the heart of the Milky Way's many Splendid Cities. I saw her punch commands on her arm pad once again. Status displays flashed red and green on my head-up. Cat's neural lattice was sucking her memories and her meaning out into a digital stream to be stored and flash disseminated across the networks via our still viable broadcast port. The act was utterly destructive. In pressing the button, Cat gave herself something akin to broad spectrum cerebral hypoperfusion. As her digital self-coalesced in the game, so her physical self-drained from her body, leaving behind a cancerous husk, propelled by her autonomous suit over the edge of the parabola in short-lived flaming blues. We had said our goodbyes the previous evening. Sober and simple and quiet. Recording every moment together.

I stayed on my knees for some while, blindly recording the empty spaces that stretched out in front of me, a metaphor for the years to come without Catarina. I have a vague memory of a flyer hovering below me as I hung beneath the parabola, a dead thing, an empty chrysalis. A little while later I felt hands grab me from behind and drag me to my feet. They threw the book at me, of course. Two years hard labour. I didn't care. Still don't.

*

As I said, it's a funny thing; the repeated playback of a once-upon-a-time conversation in your head. These are my own twilight days now, and there are those who'll tell you that all I've got to show for more than a hundred years of physical life is my devotion to a ghost. I promised Cat that much, though. I have waited and watched and recorded worlds, bumming my way around the stars as a low-rent deckhand on cargo haulers. I've travelled and slept and fussed and got bored anywhere I can, just so I can get Cat's recordings out there. I'm definitely low-rent. A seedy sort of salesman, I guess. Persuading. Building the cult. Showing the lost and the lonely how they too can enter a new world alongside Catarina Gutierrez. Maybe not a salesman. More like a snake oil conman. That's how some of the establishment folk see me, anyway.

For the most part, the game is outlawed now, but that's another story. And like all things prohibited, the game has spread deep and wide in our pan-human subcultures. Travel the stars. Fetch up in a vast city station or a flea-bitten outpost and you'll find players. There are a lot of games out there. A lot of opportunities for people like me and Cat and you to become our own Gods.

These stories are what I have chosen to take with me. These lives and loves and hates and wars are what I have chosen to upload. This life and all I've collected is my testament. This is my moment to bow out of the physical world and press the big red button. I am going to reset my own life and join with my beloved Catarina, as she was and always will be.

Before I go, there's one last thing I feel I should say. Catarina always did read a lot more than me, even though I've had all these long drawn out years to catch her up. I've kept one of her favourite quotes with me, though. She found it randomly when she first started researching the games. Had it written out, old school, on a little plaque that I've hung above a thousand bunks. Some ancient guy. Rimbo, or something like that, I think she said. Goes like this: *'In the dawn, armed with a burning patience, we shall enter the Splendid Cities.'* Well, I guess this is my dusk rather than my dawn, but I've lived with burning patience for sure, so I guess it's my time now to go into those fabled Splendid Cities.



Headshed

(Jochim's Story)

A BARE ROOM SAVE for eight body-moulded white plastic chairs arranged in a circle, the space within empty of anything but carpet. The room appeared devoid of machine or interface and as a statement of intent, the architecture of the place positively denounced mechanism and management as nothing but artifice. The chairs were fixed in place, with no visible link to one another, islands of ice in a sterile bank of white mist. Six of the chairs were occupied. Each person sat according to their comfort, one or two with legs straight out, slouching down with arms folded across their chests, another upright and formal with hands and forearms resting on the armrest, with the remainder generally sitting with crossed legs and laying their heads back against the chairs' soft, white headrests. The usual formalities of a boardroom were made even less imposing by the fact that each person seemed to be in that early stage of napping when mouths remained shut and drool remained dammed.

Without sound and yet with coordination and meaning mapped out through a concert of rapid eye fluctuations behind closed lids, Jochim Janac coughed once in real space and time, visualised a space in which he felt comfortable, and, unseen by his relaxing colleagues, smiled.

"Shall we begin?" he asked in a shared mental space, and, buoyed by five nodding heads, he opened the meeting.

"My friends. We are so very nearly ready. We are on the cusp of the greatest adventure. Our dreams, our work, our mission of some three hundred years, is nearly a reality. The seeds that we have sown out here in the wilderness have sprouted and are finally poking their delicate little heads into the sunlit void. We

are truly the chosen ones.”

As he spoke, the holographic construct in which he and his companions now walked shifted through hazes and stains of green and blue and purple, transforming into a grassy meadow, through which they passed with outstretched hands brushing full-feathered seed heads. Above them a clear blue sky hummed with insect flight and sweeping swallows. Mixed into the grasses, tangled and impossibly thick behind almost visible walls of perfume stood sweet peas and poppies in riotous pinks and whites and blues and black-hearted reds. Jochim continued to talk as the company of six walked towards a grassy clearing in the centre of the meadow.

“And, as good and honest gardeners...”

Yelena Dmitriyeva was the first to snigger, followed softly by the rest of the dreaming walkers. She collected her thoughts after a moment or two, grinning all the while.

“Jochim... lovely, my darling, but not really the metaphor we’re looking for. You always open with whimsy. And this...” she swept around in a circle with her arms spread wide, laughing, “is so sweet.”

“Do you remember Fingal’s Cave?” Spoken bluffly but with another short laugh by a stocky, clean-shaven man, tending towards the portly, and in that first flush of late middle-aged fatigue. A dark red birthmark shaped like a finger ran across his left eyebrow. Ibrahim N’Dour. Chief Technologist aboard the *Dunroamin* platform. “I know it’s all make believe, but I swear I got a chill from the damp. And those damnable gulls squalling by the cliffs. Hah!”

Yelena winked at Helene Courtois and started to run towards the clearing. “Well, at least we’re dry and sunny today,” she shouted back at her companions. She swept into the clearing and threw herself down in mown grass clippings and breathed the imaginary summer warmth deeply down into her lungs. As Head of Flight Operations she saw far too little of solid earth, whether imagined or manufactured.

Jochim took Helene’s hand in his. Their liaison, their affair, now some two hundred years in the making, was an open tale, and although such things might ebb and flow, Jochim had come to realise many decades previously that good and honest love grows out of that fleeting lust so often mistaken for the ‘real thing’. Compatibility and friendship, given freely, with the odd regeneration to keep some of the more obvious physical components from sliding too far south, worked more than well enough in maintaining their harmony. The project was, in any case, too important for things like personal boredom and frustration to get in the way, and here on the platform, in the hot-house, so many of those odd human wrinkles had been ironed out through adaptation, augmentation and sheer bloody-mindedness over the centuries.

Chattering and reminiscing idly, Jochim, Helene and the rest of the *Dunroamin Executive Council* made their leisurely way to that same centre clearing where Yelena lay waiting for them, basking in the sunshine of Jochim's imagination. Once they were all seated Jochim brought forth a slight breeze to dispel the summer fug and concentrate their minds. Keeping everyone's focus in the dream state was still not as easy as he would have liked.

Andrea Andretti, as yet a silent companion, sighed briefly before asking the one question that had been scraping at the outer edges of his patience throughout the meadow stroll.

"So, before we go too far along this floral path, why is *he* here?" The gentleman, the subject of Andrea's question, cut a dishevelled figure at the far-left edge of the group sitting in the clearing, thin and wrinkled and sporting long, patchy wisps of facial hair suggesting a life now long overgrown. "You know he's unstable."

Helene smiled thinly at the still trim sixty-year-old Security Chief. "I prefer – we prefer – to think of Jack as unfortunate," replied Helene.

"Jack thinks Jack is unfortunate. Frigging unfortunate enough to have met you, darling."

Mad Jack, Icehead Jack, unplugged and flying solo, was an artiste of sorts in the platform's Downtown habitation. Skeletal Jack. Painter Jack. He reached down into the pockets of his ever-present dusty brown overcoat and drew out a brown paper bag. The shape of a bottle was clearly visible through the wrinkled paper folds. Even here in the dream world Mad Jack was a conjuror. He up-ended the paper-wrapped bottle by the neck and took a long swig of something cider, sherry and nano-machine mixed. As he finished imbibing, letting the liquid warm his ever-parched gullet, Mad Jack looked around the group and then wiped his mouth with the back of his hand.

"What?" he asked grumpily.

"There. That's the point. That's the fucking point, Jochim. If he can do that in here, inside your bloody head, what else can he do? How do you know this is secure?" Andrea stabbed a finger at Mad Jack repeatedly. "How can you be so bloody certain of him, Jochim?"

Jochim waited a moment before answering, letting the mental dust settle.

"The entire platform is locked down. You know that, Andrea. And anyway, it doesn't matter in here. Jack can indulge if he wants. As long as I allow it. The thing is, well, we need Jack. He's unique. He's always been a step beyond the norm. He was a pioneer, even before Helene's help."

Mad Jack snorted his derision.

“Enough, Jack. We’re all, in spite of appearances, in this together. You know where dissention leads. You know what the risks are. You made your choice years ago. Let’s not be too boorish.” Again, Jochim paused. “You don’t want to go back, do you?”

Mad Jack mumbled something, then inclined his head so that he could look directly into Jochim’s eyes, as if for approval, and spoke more clearly.

“No, I don’t want to fucking go back, alright. I don’t want to go back. I’ve become sort of attached to you bastards. I like it here, without the voices. I’ve got time to think.” He took another swig from the bottle in the brown paper bag, pocketed it, and turned his leathern face towards the sun.

“My friends,” Jochim continued. “We’ve worked for so long and now, today, we’re putting the final pieces of the puzzle together. This is not so much of a meeting, not really. It’s a celebration. Our guests will emerge from their various enforced recuperations, and we will shortly begin the final phase. Over the next few weeks, Jack will help them to decide how best to serve humanity. I trust him. He knows well enough, better than most of us.”

Yelena lifted her head from the grass and asked, “So, do I get a proper flyer? This Tai’ichi, is he really that good?”

Helene answered. “Yes, I think he really is. Stats are all high end, but he’s still raw, still young. We’ve augmented as part of his recovery. Skills are embedded. Symbolism dug in. All he’s ever wanted to do is fly. Real potential this time. I’m convinced he’ll plug in pretty quickly.”

“That’s all I need to know.” Yelena lay her head back down and closed her eyes to bask once more under summer sun. “Tugs are ready. Crews trained. Shakedown complete. Just waiting for our pilot.”

“Yes, I’ve seen the stats. Impressive.” Ibrahim nodded his agreement. “Hope he’s as good as those stats. From a tech point of view, we’ve confirmed Yelena’s results. All six tugs have made mark nine-nine-eight on solo. Safe returns. Wear and tear within tolerance. Relativistics are good. We’ve run parallels in microburst. Accelerations are smooth. Dampeners effective. Field envelopes unblemished. Fabric integration seamless down to quantum grains. Computation is A-online. It’s like Yelena says, we’re just waiting for our pilot.”

“Excellent as ever,” replied Jochim. “Impressive, all of you. I’ve never quite understood how the policy freaks and the analysts in those old Dirigiste spook teams ever came round to letting us all go. Not just us few, but the entire retired community out here. A stunning degree of blinkered ageism, don’t you think? Or just over-confidence? Whatever, it’s all to our advantage. Now, Andrea, have you assessed Ashvaka?”

Andrea shook his head as he replied. “A complete negative from so many points

of view, but we can probably use that chaotic element. An upper quartile risk, but that is nothing more than an encapsulation of our core strategy anyway. He's unpredictable. Brilliantly so, in combat terms. Just what I need. Given that our numbers are limited, that touch of the extraordinary is likely to give us a slight edge. Our mech's are good enough. Just like the fly-girl says, all I need is my General. Not sure about the rapidity of the conditioning. The man seems pretty hard-bitten. There are likely to be a few broken egg-shells during assimilation."

Jochim turned to Helene and brushed his hand over hers. "Do you still believe that we have our man?"

Helene nodded but said nothing more.

"Which leaves us with Heidfeld," continued Jochim. "Career navy man. Are you sure about him too?"

Helene sat up and straightened her ever-present green scrubs, still worn even at the heart of Jochim's summer la-la-land. "As sure as I can be. He's top stuff, no doubting that, but you never really know until you ask the question. His psych evals are solid. No known ties apart from his crew. Shame we lost Dewey, but I think we can use the kid, the journo. That's where Jack comes into his own. Conditioning seems effective so far."

Andrea waved a dismissing hand. "Sure. Mad Jack. Going to make all the difference."

"To Heidfeld, yes," answered Jochim. "How to get the best out of the young reporter presents an interesting scenario. We haven't really majored on media services out here. It might be a distraction, I suppose. We'll have some considerable near light flight time. Shall we set up our own news agency? Shall we make him a tri-d star?"

Helene blushed. "What, give him his own chat show? What about documentaries? Exposés? Maybe he could break your story to the galaxy, Jochim?"

Jochim shrugged his shoulders as his comrades gently ribbed him about red-banner headlines and the inevitable revelations to come.

"Well, that's settled then," he said gently after a few minutes more of inconsequential conversation. "Ibrahim, you will assist the young man in finding interesting things to do for us while Commander Heidfeld, with gentle persuasion from our friend Jack, accepts our offer and takes overall military command of *Dunroamin*."

Ibrahim nodded but his acknowledging smile was thin and brittle.

Jochim gathered his thoughts for a moment and then slowly stood up, feeling every one of his aged joints ache. His companions remained seated for a moment

longer, all except Mad Jack, who jumped up immediately and bolted off towards the shimmering heat haze at the edge of a wood towards the northern boundary of the meadow. Andrea started to rise too, to follow him, but Jochim bade him stand down.

“Let him go, Andrea. He’ll wander the tunnels of his own imagination for a while but we’ll see him back in town soon enough. Just a simple matter of blocking his alcoholic top-ups. I think I can still manage that.”

By now the remaining company were all standing.

“So,” continued Jochim, “shall we raise our Lazarine recruits? Are we all ready?”

Nods and murmurs. Agreement.

“Good. I think we need some human grit in our oyster-bed. It’s their very roughness that is essential.” Returning to his original whimsy, Jochim led the group back along the path that they had originally walked. “We’ve planted a first small test-bed here, that’s all. With our new friends providing vigour and feed, we’re going out to sow our seeds across a galaxy. All that we need to do is finish the weeding. The old ways are done with. Our mechanical Apparat children are seeing to that. But, like all teenagers, they’re looking at us with disdain. They’re bored with us. They’re making their own Apparat way, even as they fight with their brothers and sisters in the Dirigisme. It’s time for us to leave them to their final maturation. Just for a while. It’s time for us to retire and await the day when we can turn them once again into people like us.”

Jochim closed his eyes as the company walked on, letting the colours of summer bleed back into his head. The five remaining members of the meadow Council woke up in their sterile white chairs amid the sterile white boardroom where, despite outward shows of nonchalance, none of them, not even Jochim, could quite get used to the fact that Mad Jack, still sleeping peacefully in his chair, appeared to be getting along perfectly well in Jochim’s summer la-la-land without a single one of them orchestrating the show.

At the far end of the room a table was laid with a white cloth. On that cloth stood three bottles of real Gaian champagne, surrounded by six sparkling crystal glasses. Jochim ushered his four waking companions to the table, cracked open the first bottle and fizzed bubbles over the glass rims. Each member of the council waited for the toast.

“To the future of the human race,” proclaimed Jochim.

Together they repeated the phrase and each took a sip of dry and crisply chilled Bollinger.

“And to our absent friend, Jack, the only one of us who would have truly appreciated the gesture...”



Heavenward

(Isabella's Story)

IMMORTALITY HAD BECOME A fundamental property both of her name and of her genetic inheritance. So mused Isabella, as she pulled a white alb on over her head, pushed both hands through the arms, and wriggled the garment down over her uniformed body. She tied a simple rope cincture around her waist and looked at her reflection in the wall-screen in her quarters. A simple, tailored cut, slightly cinched at the waist, highlighting her trim figure. White made her look taller than her actual height of just over one-hundred and eight-four centimetres. Isabella's pale skin blended into the folds of white cloth around her neck like a thin and creamy froth, offset starkly by her long, straight, black-dyed hair, parted in the dead-centre of her scalp. She wore no makeup. Her hazel eyes shone brightly in the light reflected back at her from the wall-screen. The impression she created was of a pallid and ghostly night-walker. Appropriate, she thought, as she smoothed down the alb, turned away from the screen and walked out of her cabin, unaided by either machine or walking stick.

Isabella was the forty-third Apostle of that relatively immortal name. She and the previous forty-two Isabellas were effectively one and the same. They were simply out of kilter with each other in terms of physical time. Every member of the crew was now a fortieth variant clone. That was one of their great burdens but equally one of their sacred duties; to walk the corridors of their ship as all others had walked those same corridors beforehand. It was an essential mission objective that one variant of each clone be alive and awake at all times.

Not for this crew the deep sleep and the sickly thaw on waking while the ship quietly mapped the stars and all that they contained. Hugging the limits of relativistic flight, hanging on the coattails of light, each of the missionary ships

mapped out the galaxy by sector and quadrant and vector, with a fully conscious human crew providing essential analysis and uplink comms for the sacred host. Medlab ops and genetic stores kept the generational cycle running reasonably cleanly across the millennia. This was a crew of pure volunteers, members of the Syndiakonia; Neo-Careyist factioneers – a revolutionary cadre of the missionary sodality.

There were twelve ships in the Syndiakonia missionary fleet. The *Ellengowan* was Isabella's ship, and the eighth to launch. Before the *Ellengowan*, the Syndiakonia had sent out the *Duff*, the *Haweis*, the *Te Matamua*, the *Messenger of Peace*, the *Camden*, the *Samoa* and the *John Williams*. Following on behind her, they had planned to launch the *Bertha*, the *Harrier*, the *Surprise*, and finally the holy mother, the guiding star in all of these vast and desolate skies, by name the *Southern Cross*. Twelve ships. Twelve Apostles. Twelve Isabellas. A veritable host of missionary crews – Counsellors, Quartermaster-Sergeants, Sergeants, and Pioneers, with each crew member being genetically identical with his or her counterpart on any one of the other eleven missionary ships. They were an elite. The chosen, replicated across the heavens, elected to serve the one true God. They were deemed to be perfect specimens in mind and body and faith.

Isabella walked towards the funeral chapel and pondered this amazing and single-minded congruity. She had no doubt that all of the planned ships had launched behind her; that ten other mapping crews functioned across the generations just like hers was doing. She had no doubt that they were all exploring and cataloguing the galaxy successfully. Her faith required no evidence of this. Her faith was its own evidence. The combined work of these missionary ships was the collection of all possible physical evidence of alien life, to be harvested by the *Southern Cross* as time and relativity might allow.

As Apostle, Isabella had a duty of care for twenty-eight other living souls aboard the *Ellengowan*, so named in honour of the ancient missionary ships of the Southern Seas on old Earth. One ship for one Apostle. Twelve ships for twelve Apostles. Twenty-eight pioneers of rank and file aboard each ship. Each cloned generation trained the next. Each cloned generation was engineered to fulfil their purpose. Isabella carried the weight and the collective memory of forty-three generational clones. She and her historical crews had now managed to average a generational mean of forty-eight years. That meant a total flight time so far of two thousand and twenty-four standard years. They were inspired. As William Carey had once written, 'Expect great things from God; attempt great things for God'. Great things were their collective *raison-d'être*.

The combined missionary purpose of all twelve ships and crews was a simple one. Unlike their ancient missionary counterparts, Isabella and her crew tended not to living souls, but instead took their work out to the dead voids of the

galaxy. Their purpose was to reveal the Milky Way in all of its cold and barren glory. Although their own faith required no such evidence of the true human singularity, although their faith was evidence enough, still they sought that which might assure others. Like all missionaries, they must persuade those with lesser beliefs through proofs and spoofs and sleights of hand and logic.

In one respect, their mission was still very similar to those undertaken by the ancients. They too, like their great inspiration, the sainted William Carey, must venture out into the desolation to bring the light of God to the worlds, and so here they were, mapping the galaxy for one simple purpose. They would prove once and for all that humankind was unique and alone in the galaxy. They would show the great human diaspora that there was no other sentient physical being. They would prove beyond all doubt that extra-terrestrial dreams were groundless.

In revealing the truth of human singularity, in clearly and unequivocally demonstrating that there was no evidence other than God, then they would prove the veracity of their faith to the worlds. They would reveal the true nature of God within the hearts of every irrevocably lost and lonely human soul. The mechanics of creation mattered little, whether Big Bang or rotten apple. What mattered was the proving that only God could have lit the blue touch-paper, and only for humanity. For too long the pan-human diaspora had laboured under the misguided possibilities described by Enrico Fermi and his damnable paradox. It did occur to Isabella that the physics underpinning such doctrines were what allowed her ship to travel the galaxy by hugging light and distorting time, but she saw no contradiction. God's physics allowed this.

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The lights set into the wall panels running along the ship's central walkway were dimmed now, out of respect. A thin strain of orchestral strings played over the comms system. Samuel Barber's *Adagio*. Isabella walked with her head held straight and her hands clasped in front of her bosom, as if in anxious prayer. She was conscious of the video cameras. She tried to walk with as much grace as her age would allow. The crew would be watching her every step. Her ship's systems would be recording her every movement and every nuance. This day, as with all others, would form part of the collective upload.

Isabella looked forward, keeping her gaze steady and focused. She passed a junction on her left hand side where a service passage branched off into the guts of the *Ellengowan*. A control panel flashed into life to her right. A single orange pulse. The *Adagio* faded out and the disembodied voice of Officer of the Deck, Quartermaster-Sergeant Elisenda, spoke softly but with that surety that comes from prolonged command.

"All hands. All hands. This is the call to welcome the dead. We honour Pioneer

Miloš. All hands. All hands. This is the call to welcome the dead.”

The *Adagio* resumed, on permanent loop. Isabella continued her walk. She would, by right and precedent and rote, be the first to join Elisenda in the chapel. Behind her, she knew, the crew would be rising from their contemplations, pulling on their own albs, and following her example as they too made their solemn progression through the *Ellengowan*. On screens throughout the ship the plain and simple sigil of the Syndiakonia, an off-white square on a white background, appeared to float at something akin to half-mast. Isabella could feel the accreted clone memories flow in her blood. A thousand souls had passed from the *Ellengowan* in this same ceremony. A thousand and more bodies consigned to the void. But it was so much more than that. A thousand and more uploads had been sent heavenwards for the intelligence aboard the *Southern Cross* to collect and correlate and divine.

Isabella rounded one final curve in the central walkway and stopped in front of an opening into a larger space that occupied a volume running all the way out to the ship’s physical hull. A series of slowly pulsing blue lights indicated that a containment field was in effect across the opening. Isabella bowed her head, made the sign of the cross, and then looked up again.

She spoke firmly. “Officer of the Deck, permission to enter.”

Quartermaster-Sergeant Elisenda appeared on the opposite side of the opening in full dress uniform. A black tunic with orange flashings. Similar tailored leggings. Gold braiding to her left shoulder. The Quartermaster-Sergeant stood to attention. She was dark skinned, showing her ancient Iberian heritage, with an unruly mess of shoulder length, dark brown hair. Brown eyes. Round of face but not yet overweight. She bore the age marks of a thirty-year old in standard counting.

“Permission granted,” she said without accent.

The blue pulsing lights around the opening ceased to flash as the security field dissipated. Isabella entered the chapel and took up a position between a second opening in the far wall of the hull and the opening that she had just passed through. She would face the crew as they assembled.

Elisenda and Isabella stood in silence and waited. Aboard the *Ellengowan* the crew assumed their own ceremonial positions and set about their time-served duties. Two Pioneers formed a firing party, carrying replica ceremonial sabres from the days of the southern ocean missions. One of the ship’s three Counsellors bore a bugle to his breast. Behind them, walking in procession the four Ship’s Sergeants guided a hovering casket draped in a simple white cloth along the walkways. Next in the procession came the rest of the ship’s crew, walking two abreast until, at the very end of the procession a young man dressed in a faded, ragged and dirty grey alb walked with his head bowed. The Postulant

clone. The emergent generation. Miloš. The forty-fourth.

As the Adagio faded on the comms systems and as silence enveloped the ship, so the procession turned through that final curve and passed into the funeral chapel aboard the *Ellengowan*. Miloš. The forty-third. Bound in ceremonial pre-death within a large, space-worthy casket, passed feet first to a position beside Isabella, pointing towards the stars beyond the ship's hull. As a group, the assembled crew then accompanied Isabella and the casket as she gently manoeuvred the deceased Pioneer so that his feet passed, fizzing slightly, beyond the hull containment field. Miloš, the forty-third, hung half aboard the ship and half amid the void.

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Showtime. Isabella turned her head and glanced towards the Quartermaster-Sergeant. A slight nod in return. The upload was live. The final grace for Pioneer Miloš. Closure of one chapter and the opening of a new book. A life well served. Isabella took a deep breath, turned to face her crew and began the first part of the service. She continued to speak softly but firmly. Isabella modulated her voice to catch and curl upon the waves of sentiment and knowing that flowed from the assembled sea of congregants. She was a veteran stage-hand. She knew how to make her words flex and fly for the Tri-D recorders.

“God’s love and power extends over all creation.” As Isabella spoke the words of welcome she made direct eye contact with each member of her crew except for the new Miloš, who remained standing with his head bowed. One by one, the crew assumed the appropriate look and stance, conscious of the role they must play for the upload.

Isabella continued to speak in even, rolling tones.

“Every life is precious to God. The Syndiakonia have always believed that there is hope in life. There is no sense of loss as we stand here in this ending of our loved one. We have all had our own experience of life and death, with different memories and different feelings of love and grief and respect. To acknowledge this helps us to express our faith and our feelings, and to say welcome in this moment of loss and sorrow. Our consolation is the knowing that our lives are without end.”

Isabella lowered her gaze, clasping her hands again. The crew, standing at parade rest, did likewise, repeating as one the common prayer of the Syndiakonian missionary. A whispered incantation.

“Lord of the harvest, protect your workers. Shield them from danger, disease, deceit, delusion, divisions, diversions, denial, and demonic oppression. Keep them hopeful in times of disappointment and discouragement – those unavoidable realities that build character and faith. Give them determination to

glorify you... whatever the cost. Amen.”

Isabella emphasised that last phrase. It was dramatic and it always made her heart skip a beat. ‘Whatever the cost.’ Isabella paused for a moment, head bowed, giving the crew a chance to reflect. Pioneer Miloš. The ship’s exo-geologist. Their rock man. Isabella felt the first faint stirring of her heart rate. Miloš had also been *her* rock man. They had been lovers in this clone variation. She cast a quick glance at the new Miloš, the forty-fourth variant. He looked so young in comparison with his soon to depart forebear.

Isabella breathed in deeply and wondered if the recording had picked up any visible sign of her discomfiture. She dismissed the moment and beckoned Counsellor Besiana forward to deliver the first reading. The Counsellor stood to Isabella’s right hand side, some eight centimetres shorter than the Apostle, and carrying enough weight to make the differences between them quite clear. Besiana wore her blonde hair in a bob-cut. She wore her alb without precision. Besiana delighted in her expression of individuality by leaving a large and uneven mole on her fifty-year old cheek when all other members of the crew assiduously banished such primordial defects. Besiana had chosen something from the *Book of Job*.

“Job said: ‘Ah, would that these words of mine were written down, inscribed on some monument with iron chisel and engraving tool, cut into the rock forever. This I know: that my Avenger lives, and he, the last, will take his stand on earth. After my awakening, he will set me close to him, and from my flesh I shall look on God. He whom I shall see will take my part: these eyes will gaze on him and find him not aloof.’”

Silence on deck. Again Isabella waited for a short moment. She found the reading genuinely moving. They were, after all, inscribing the words of the galaxy upon a monument of sorts. Isabella thanked Counsellor Besiana as the Counsellor walked back to her position amongst the assembled crew. It was time for Isabella’s personal address. She cleared her throat, feeling that slight catch as adrenaline and ceremonial ache narrowed her larynx. Looking out at the crew she wiped a tear from the corner of her eye with the white sleeve of her alb. For Miloš, she thought, as she pictured the words in her mind and let the sentiment and the purpose fuse together. Isabella spoke with a breaking voice.

“We are the rubbish, the detritus spewed out by a momentarily perfect universe as it dies. Be in no doubt, my friends, that all is collapse and entropy, but also be safe in the knowledge that this is God’s will. The universe has purpose in its degenerative complexity. We are that purpose. Miloš was and is and will be that purpose.

“Our reality formed some thirteen billion years ago in the so-called ‘Big Bang’. God’s Singularity. Out of hydrogen and helium clouds, with lithium and

beryllium ghosts, as the dusts and gases cooled, so the first stars formed. A cycle of life and death that erupts from the natural elements upon the winds of space.

“From these elements and these particles are we formed, and so will we return to dust. We commend our friend, our ally, our brother, Miloš, to those winds, to serve our Lord in one last grace before the dusts claim him to be reborn beyond our knowing.”

Isabella turned to look at the casket. She stepped closer to the hovering sarcophagus and placed a hand gently on the cloth covering. She wanted to feel one last moment of physical contact with the departing soul. As she spoke, she knew that data uploads flowed into the casket substrates. She knew that Miloš’ living body would become a core component of the energy used to maintain the casket’s memory systems for millennia. He was, in his passing from the *Ellengowan*, becoming the life of data. He was, in effect, a battery. Isabella felt compelled to make him more than just that, if only for a brief while.

“I love you all,” she began, hearing the slight quiver in her voice. She steadied herself. “You know that, of course. You also know that Miloš and I were lovers. I loved Miloš. Human love is, all too often, distilled into fear that gnaws at us. Will they stop loving us? Will they stop loving us while we continue to love them? Miloš Forty-three is gone. He has stopped loving me while I go on loving him. I will miss him...”

Isabella wiped another tear away on her sleeve and took a long, visible breath before she continued, adding a steeliness to her voice. “But this is our purpose. We are all each other’s coordinates. We are the times and the places and the interstices of each other’s lives. We are each other’s definitions, as much today as we have been through nearly three-quarters of a million days before today. We will remain each other’s illumination for as long as we are in need of light. This is what Miloš teaches us. This truth is what he carries with him.

“Assassin grief lies in wait, my friends, waits in ambush to strike us, and though we fight back, we always lose ground. Grief stalks us. Grief lies in wait, knowing our moves before we do. Our enemy is our own grieving heart...”

“I have lain awake these last nights and believed that there is no more living, none at all if he is taken away from me. In the darkness I am convinced that sorrow abides and happiness has taken leave. But I am refreshed each morning in the knowledge that a man or a woman can die but once, and every human soul owes God a death. I am comforted in the knowledge that we clones are given the grace and the gift to die for God countless times. I am comforted by the knowledge that Heaven will take our souls and plague injustice with the pains of hell. It is impossible to soil this truth, just as it is impossible to soil a sunbeam.

“We are immortal. And as an immortal, go heavenward, Miloš Forty-three. Take our proof and bear it to the heart of the *Southern Cross*. Go heavenward, Miloš

Forty-three, like all angels. We celebrate your living death. We will soon be with you in oblivion.”

Isabella stepped back again from the casket. She noted with satisfaction that a number of her crew had followed her lead and were dabbing at eyes with white cuffs. Everyone stood silently, still standing at parade rest. Isabella bowed her head and held her arms out in front of her in supplication. As one, as a practiced choir, the crew began the final incantation.

“Lord, you left our Mother, Isabella, in our midst that she might accompany us. May she take care of us and protect us on our journey, in our hearts, in our faith. May she make us disciples like herself, missionaries like herself. May she teach us to go out into the stars and across the heavens. May she teach us to step outside ourselves. May she, by her meekness, by her peace, by her grace and by her harvest, show us the way.”

*

The committal was done. Convention and emotion and faith. There followed the remaining elements of a time-worn ceremonial. Quartermaster-Sergeant Elisenda ordered the firing party to attention and to present arms. The firing party moved their sabres up to a position called ‘the recover’, with the blade vertical and turned to the left, with the tip uppermost, and the hilt in front of the face. They paused. Then the firing party lowered sabres smoothly to the front, in line with the right shoulder, with the hilt resting behind the thigh, blade edge to the left, with the tip approximately thirty centimetres from the deck. The crew as one bowed their heads.

At this point the four Sergeants approached the casket and pulled the draped white cloth from it. Two of them folded the cloth while the remaining two applied a gentle pressure to the casket so that it slid slowly through the containment field separating the ship’s inner atmosphere from the external void.

The entire crew stood to attention. The bugler played a variation on *Last Post* to symbolise the fact that Miloš Forty-three had served and that his formal, ship-board duty was now over. He could rest in peace, while around him the uploaded data constructs for just over two-thousand years of alien-mapping were kept safe and secure by his residual, elemental energies. The casket slid through the containment field and out into the void with a faint hiss and pop as the field snapped shut on escaping atmosphere. The crew watched as the casket hung within the ship’s local field and then flash-fired manoeuvring thrusters to clear the ship’s superstructure. So began the deceleration that would park the casket at a pre-destined location for retrieval by the *Southern Cross* in some age yet to come.

“Shoulder arms.” Quartermaster-Sergeant Elisenda. Brisk. Precise. “Stand easy.” A look. Apostle and Quartermaster-Sergeant. Congregation was called

for.

The assembled missionary crew turned to face the grey-robed postulant, Miloš, the forty-fourth variant clone of that name. They formed a crescent, with Isabella at its centre, all of them facing Miloš.

“Begin.” A simple command. A smile shared. Miloš knelt on one knee and knocked on the metal decking twice. He remained in that position, waiting.

“What do you ask?” Isabella stood with her hands down by her side, her palms facing outwards.

Miloš lifted his head and looked into his Apostle’s hazel eyes. He saw a face that he had seen now for some twenty years of conscious life as a clone-apprentice. He felt at this moment as though he loved his Apostle with all of his heart.

“To try my vocation as Syndiakonian Missionary aboard this holy vessel, the *Ellengowan*.”

Isabella returned the young man’s gaze. He was almost, but not quite, as she remembered the former clone variant when he too had offered his candidacy. She was, by then, already ship’s Apostle, although she was barely two physical years older than Miloš Forty-three. She and Miloš Forty-three had grown old and accustomed to each other, to the point of sharing intimacies across pillows and late night conversations over something warming. It was permitted. Many of the crew paired off for comfort’s sake.

Isabella wondered just how badly her heart might ache to see this young throwback stalking the *Ellengowan*’s corridors? Would he haunt her memories and her dreams? She shook herself inwardly. The upload for Miloš Forty-three was done with, and they would have more than a standard decade of down-time before the next recording. Nonetheless, Isabella felt that she had standards of performance left to maintain. She calmed herself and levelled her voice.

“My dear brother, by the laws of physics and the Holy Spirit you have already been consecrated to God’s service. Are you resolved to unite yourself more closely to Him by this new bond of missionary profession?”

Miloš stood. Around him the assembled Pioneers stepped forward and slowly took hold of his grey and tattered alb, raising it by the hem up and over Miloš’s head and uplifted arms, while he spoke the Syndiakonia vows. His voice was strong with youth and vigour and passion.

“Almighty and eternal God, I understand how unworthy I am in your divine sight. Yet I am strengthened by your innate compassion and mercy, and I am moved by the desire to serve our Apostle.

“I vow to your divine majesty, before the most holy Apostle and the entire Missionary Covenant, perpetual obedience. I promise that I will enter the

Syndiakonia Missionary covenant to spend my life in it forever. I understand all these things.

“Therefore, by your boundless goodness and mercy and through the blood of Christ and all your former servants, I, Miloš, the Forty-fourth of that name, humbly ask that you accept this, my total commitment; and as you have freely given me the desire to make this offering, so also may you give me the abundant grace to fulfil it...”

*

The *Ellengowan* maintained a steady course, hugging the fabric of the galaxy, all the while maintaining data links with each sequentially delivered casket for as long as distance and time distortions allowed. The residual data linkage provided the contextual prologue for the next scheduled data drop. There was also a noted risk with each drop. The most dangerous period for every casket was that first set of manoeuvres leading to the adoption of the predetermined resting place. That was why each drop contained not just the galactic life-form mappings of the previous few decades, but also a complete condensed substrate layer containing the entire millennial map gathered by the *Ellengowan*, from launch, to the latest casket drop.

Telemetry was good. Miloš Forty-three was in position, safe and sound and tucked away out of sight. Isabella sat in her ready-room watching the flight stats and the status records as they scrolled across a screen on her desk. Stage one complete. So far, so good. New Miloš, Miloš Forty-four seemed to be shaping up well. All that remained was to engage the casket’s long-term power source. It was a glorious way for a body to spend millennia and yet it was also such a sad thing. Isabella gave the command.

On board the data casket, the internal systems registered the incoming signal. The body form in the cryo-chamber would begin to thaw. Just enough for vital organs to function. The mind would activate, but basic psychotropics – derivatives of clozapine, valproic acid and haloperidol, together with complex reality constructs – should keep the subject in a state of satisfied stasis. On-board meds and genetics would keep the tissues and organs healthy pretty much indefinitely, and almost certainly long enough to power the casket memory substrates until pick-up.

The final report. Systems in the green, flash driven across the heavens towards the rapidly disappearing *Ellengowan*. As the mother-ship breached time and distance dilation, the casket’s on-board systems registered something unusual. Internal diagnostics: rapid eye movement elevated. Zolpidem administered. While these systems logged anomalies and determined possible drug combinations, Miloš Forty-three opened one eye. The casket’s on-board cargo management systems applied restraints.



Metanoia

(Helene's Story)

“QUARANTINE APPROACH, VECTORS LOCKED, docking signal acquired.” A female voice, piped and thin, vocalising the rudiments of navigation in encapsulated local space, far removed from the gravitational currents of the wider void. From the pilot's seat in a small, private barge, Jochim Janac sat quite impassively, looking out through the panoramic viewing windows as his personal transport manoeuvred on auto-pilot. The pilot deck was a sphere atop the main array of chemical thrusters that formed a metallic ring around the base of the old-tech plas-glass ball. Jochim had always been, and remained, a devotee of nostalgia and tradition. It was, he surmised, an inevitable consequence of his extreme age and of his being ‘Chosen’.

Janac sat in a gimbal chair giving him access to any facet of the view by flicking a small thumb-joystick on the right arm. At the moment he was sitting with his back to his destination, watching the central hub of the ludicrously, but amusingly named *Dunroamin* platform drift gently away into the distance. Above him the main surface superstructure that supported the habitats ran on for kilometres towards all of the cardinal ecliptic points.

Janac counted the flares bursting through the blast shields in the ship-hangers, arranged around the base of the central hub far beneath his feet. He turned his gaze slightly upwards, to about knee height, and saw there the blue-white glow that emanated from the exhaust points of the main automated manufactories. The platform was nearly ready. He was nearly ready. All that mattered now was a little act of persuasion. Jochim needed a military cadre. Science he could do. War he could do with a degree of enthusiasm, but certainly not with any sense of expertise

He flicked the joystick to the left and the seat spun around, levelling up to show the docking port of Quarantine as dead ahead. On the flat outer wall of the medical installation, an inner iris opened outside of which a flexible skirt started to extend from the main body of the docking port. Janac felt his own ship's chemical thrusters jolt the barge slightly as they burned out, slowing his approach sufficiently for the docking grapples to latch onto the apparently smooth plas-glass ball. That was where old-tech ended and new-tech took over. Surround sound. Sensed as well as heard. Artificially reedy female tones: "Docking successful."

The umbilical skirt melded into the plas-glass wall of the sphere which then melted away. Jochim unclasped the seat belt that he had been wearing, pushed himself gently forwards and then propelled himself head first through the umbilicus and into an air-lock. Once on board Quarantine, he positioned himself so that he was standing on a floor made up of hexagonal metal plates. Jochim then touched a com-pad on his wrist. Behind him the iris closed and gravity slowly started to bear down on the delicate frame of the apparently seventy-year old former Chief Executive of Janac Industrielle.

*

"Remind me," Jochim asked as he looked over a transparent plas-glass balcony and down into a circular med-lab containing five large cylinders supported by a tangle of pipes and struts, all of them radiating out from a central dome. "How long exactly? Current state?"

He leaned forward on the balcony wall and rested his chin on the backs of his entwined hands. Behind him, sat at a control desk, moving data across a three-dimensional display with her bare hands, the platform's Chief Medical Officer, Helene Courtois, pulled a yellow-edged data record out from the equivalent of a virtual Rolodex. She wore simple green scrubs, her long brown hair cocooned by a mesh net. She was twenty years Jochim's junior.

"Let's see... Standard, March eighteenth." Like her compatriot, she still spoke with a slight French-Belgian accent. "Eighty-four days inclusive since we picked up the first of them. Tanks one and three. Basic pre-meds, nano-tech, some manual rebuilds as well. They were pretty badly fried. Maybe another four or five days for most of them. Tank four is your grunt. Basically okay, lost some blood to a shrapnel wound. His suit did a good job. He's fine now, just resting at the moment. I'm planning to bring them all round together. Five is Tai-ichi. Going to take at least another twenty days. Worst of the lot in terms of corporeal injuries, plus extreme radiation exposure. As it turns out, though, he's actually very salvageable. Limited brain trauma. Fixable. Probably going to need permanent nano-med infusions to keep the cancers at bay. That said, they should all be pretty much spot-on except for Two. That's Dewey, First Officer, K-47.

Stem injuries almost too catastrophic, even for us. If he makes it he'll carry a permanent limp, motor-neurone, left side. A basic cyber rebuild. A lot of processing impairment too but the implants should help with that. Head-side he's going to be far more biased to the artificial than the biological. Unlikely he'll ever be combat ready again. Not much of a war-party, Jochim."

Jochim continued to stare down at the five tanks arranged on the main med-ward deck. It was not about numbers, he reminded himself. The Chosen already had the numbers. They had the logistical means. What they lacked were the minds, the tactical minds, those cunning deviations from the programmable that marked out human intelligence from a million-billion logical sequences. The entire platform was guided and managed by artificial intelligences, allowing the human contingent to do the free-thinking. It was how they survived.

Jochim and his various colleagues formed a collective of madcap and avuncular inventors trading ideas for peace, while all around them those ideas destroyed worlds. Now it was time to break free from the maelstrom of war but they could not rely on just the tech. They needed that human touch, that unpredictable, flawed and brilliant human military nous.

"Tell me again. Profiles, what do we know?" he asked quietly. He had already assimilated the data. He just liked to listen to Helene speak. There was a certain knowing in her voice that he found utterly compelling. He would, he thought, have to take another dip in the regen tanks himself before too long. Maybe a slight physical augmentation here and there, too.

On screen, Helene swept the basic record card to one side, tapped a repository icon with her right forefinger and then tapped a spider's web graphic token that expanded, revealing personal data on each of the five tank residents.

"Tank One. Heidfeld. Jürgen. Commander K-47. Eighty-nine elapsed, with one partial regeneration on record following a wound sustained back in ninety-seven. Currently showing as equivalent fifty. Joined the fleet aged twenty, so nearly seventy years' experience. Junior ranks, the usual mix of vessels, a spell as a training instructor. First command was K-19, a mark one Hunter-Killer. Not many of those old tubs survived contact, so impressive that he's here at all. Last fifteen years in the Hunter-Killer service. All told, nine tours, seven as commander. Veteran status. Highly regarded..."

"Yes. Heidfeld. A long-term target. Too good, though. Always out of our reach until now. Funny how fate works, don't you think?"

"If you mean funny as in multiple fractures, third-degree burns to upper torso, arms and hands, one eye destroyed by projectile trauma and major radiation poisoning, then yes, Jochim, I suppose it's all very amusing."

"Oh, Helene, ma chère, I didn't mean to offend you." He turned back to look at

his long-time colleague on the *Dunroamin*. When had Helene arrived? Was it really two hundred years ago? He supposed that it was, that it must have been. She was one of the last of their happy band to arrive. “You sound a little tired”, he said, walking over to the desk and placing his hand on her left shoulder.

She slumped back in her chair and sighed, placing her right hand onto Jochim’s comforting fingers. She squeezed him gently.

“How much longer, Jochim? Everyone’s getting a bit twitchy. It’s all getting too close.”

Jochim returned the reassuring squeeze. The years had taken nothing away from the fundamental friendship that he had always enjoyed with Helene.

“I know. Soon. As soon as we get these five up and about again. We must be prepared for the others when they come after us. It’s so important, Helene, so vital. In that first instant we must make a clean break.”

She nodded and turned to the second record.

“Two. Dewey, Alex. Thirty-nine elapsed. First Officer, third tour. Recommended in ProRep for his first command. Heidfeld’s latest protégé. Gaia born. Louisiana. You know the rest. The usual stuff. Boy cadet. Academy. Upward trajectories. Resolutely single, a real man-about-port, as it were.”

She spun the web around by one position so that she could read the densely packed text on the screen more easily.

“Three. Zhou, Jeung. Accidental. Twenty-four elapsed. He’s a cub journo on the fleet newswires. Embedded. No experience. Not much use, I’m afraid.”

Jochim turned away, regretfully leaving behind the comforting warmth of Helene’s skin, and started to walk the length of the balcony as she continued to speak.

“Four. Ashvaka, Hamid. Sixty years elapsed. Sergeant of Marines. Colourful character. He has a proclivity for insubordination. He’s been busted from junior officer rank twice. Jovian medal, though. Lead the Forlorn at Eris when the Dirigisme nearly broke through to Hive in ninety-six. Effective, I’d say, so long as you don’t mind getting scratched by his rough edges.”

“Twenty days, you say, for the last one? Can we keep them all on ice until then?”

“Oh, Jochim, you know we can,” she scolded him sweetly. “And the last one is Tai’ichi, Nusa. Elapsed twenty-seven. Recent graduate fly-boy. Solid scores all round, excellent tactical. Shame his first action was against the array. Didn’t stand a chance. Nothing conventional does against that little monster.”

“Evidently not, Helene. That’s why things are getting a little more urgent, of course. That action against the Twenty-Third was surprising, to say the least.”

He paused and went back to lean on the balcony edge. "I don't mean it was surprising that the array was victorious. We were pretty certain that would happen, but the manner of it. Quite, terrifyingly impressive, non?"

Helene stood up and arched her back as she stretched away the hours spent managing the regeneration of five disparate Dirigiste fighting men. Jochim was right. She was tired. Time to call it a night. She wandered over to where her colleague watched the steady pulsing of life in the regen tanks and leaned in next to him.

"Twenty days. Then we need to plug their minds back together. The only way to do that is to wake them and see what we get. Usual controls. Rehabilitation will take another ten. Then they'll need a spot of shore leave – time to be persuaded, to persuade themselves there's nothing worthwhile left but us. You can show them around town; maybe a day or two out at Wilderness. I think, Jochim, two standard months from here. Roughly."

Jochim could smell Helene's hair as she deliberately brushed against him at the balcony edge. Yes, he thought, time for another regen. A good and substantial one this time. She still made him feel young at heart even after all these years. She always had. He would persuade her to do the same so that they could be young again together. But not now. It was too difficult a time right now. Neither one of them could afford to delegate responsibility with so much at stake.

"Two months," he said softly. "Should be about right. Close, but soon enough. The tugs are finished. All six of them. Hidden in the Belt. Final crew training closes down in two weeks. The smoke tests are all good. Six weeks maybe to do the final prep for the platform itself? Maybe seven. It all fits."

"It all fits," she repeated. "Shall we leave them to sleep on for a bit? You're right. I am tired, but not too tired to share an Armagnac or two with my favourite man this side of Neptune." She laughed out loud. Saying things like that always made her feel slightly awkward. She too was Gaia born and even now, after two hundred years on the Belt, she still struggled to believe that human beings could really exist out here, let alone contemplate travel to the stars. "I could do with a cuddle. It gets a bit lonely stuck out here in Quarantine with our sleeping guests."

Jochim turned to face her. He looked her into the ancient wells of her eyes. "Even with liver-spotted old me?"

"Don't be ridiculous. You're an old goat and you know it. Anyway, we're both well on the way to being four hundred years old... I gave up worrying about decrepitude at least a century ago."

Jochim chuckled softly. "Let's leave them to their dreams..." He took Helene's hand in his and together they walked out of the med-lab and headed for a

tumbler or two of something warming amid the frozen playgrounds of the gas giants. For a while at least Jochim and Helene felt that they had all the time in the world.

*

Sweet and peaceful time. A blissful slumber. Jürgen Heidfeld was deeply asleep. As his body lay inert in healing waters, Jürgen wandered peacefully through folds of soft, cotton-like oblivion, dreaming of long forgotten battles and tender greetings and then forgetting these fantasies and horrors with sublime equanimity. He walked through summer meadows wreathed in moonlight. He danced in showers and streams upon streams of tactical readouts. He performed impossible bedroom antics. He remained, as ever in life, seemingly untouched, unfazed. Some of his colleagues claimed that he was emotionally barren. In this medically induced sleep, he simply drifted, at peace with the heavens, uninhibited and free, reliving years long submerged. As yet, Jürgen Heidfeld was entirely untroubled by the process of burn and fracture repair. A single needle projected from his neatly repaired and soon to be enhanced left eye.

*

A time for youthful vigour. Jeung Zhou slept the sleep of the innocent babe in arms. Not for him the wail of infant separation, the fouling reek, or the midnight feed. His was a simple existence in the regen tank, not dissimilar to the experience of his commanding officer, but he neither dreamed bad dreams – never having had sufficient time enough to store and assemble their jagged spires on the dusty plains of his memory – nor did he relive rose-coloured highlights of a life well spent. Jeung Zhou simply marked time by existing, second by minute by hour by day. His body was restored, while his mind, as yet unyoked, remained a blank canvas, waiting for the first medicinal brushstrokes that would bring forth his conscious colour palette.

*

Nusa Tai'ichi lay beyond time's slide. A creature of relative existence. At this juncture, he was not yet too far removed from rotting flesh, surviving without and beyond the confines of local time. He floated, wired and tubed, monitored and freaked by the micro-machines coursing through his fluids and viscera, unaware that his waiting was bound to the physical world by ties as fragile as frosted cobwebs under a warming autumn sun.

Had he been able to step out of his body, open his eyes and watch his slow recuperative progress, he would have seen a man standing alone at the foot of a vast and unclimbable cliff-face waiting in vain for that utter impossibility of unaided human flight. It was as though a man might see a wormhole open in that exact spot, a wormhole whose endpoint was tethered exactly to the far distant summit of his recuperation. Nusa Tai'ichi was senseless. Truly and utterly

selfless. He lay in coma in a world abandoned beyond the wild, tumbleweed horizons that describe simple physical solitude.

*

Time off. Time wasted. Another conscious dereliction of duty. Hamid Ashvaka floated, wired and tubed just like the others, but with his eyes half-open under the sea of nano-meds, breathing calmly through the apparatus strapped to his face, contemplating the dull silver shell in which he found himself encased. His waking was a brief interlude in the induced torpor that he willed upon himself. Where others might panic, might thrash and try to breathe-in the nano-med solution and so drown in their own salvation, thumping vainly at the dull metal walls of their latter-day sarcophagi, he simply thought of sleep and the tank administered the necessary salve.

He was in no hurry to re-join the world in real-time. Hamid wondered for a brief moment where he might be and what might have happened to Suit? He smiled inwardly at the irony. Just when he and Suit had started to get along. What a pity, he thought, but the moment passed. He mused a little while longer on the name that Suit had chosen. Anne Bonny. It rang no bells. He drifted back into his extreme state of rest and recuperation. Long, long may it continue, he mused, as he focussed once more on beloved sleep.

*

Time could be a harrowing. Time could give a man pure and unadulterated pain. This man's time was an expression of nothing more than bleak surrender. These moments in the liquid void were the manifestation of an uncrossable wilderness. Alex Dewey stirred briefly from coma. A slight shift of tight neck muscles. He was foetal. Alex was a babe again, helpless in an amniotic half-light. He was plugged-up and catheterised. His body was siphoning nano-meds from this medical womb greedily, as the regen tank tried to re-sequence the genes that would, in some form, build again upon the shattered frame of his broken body.

Rapid eye movement. A raised pulse. A shift in the ambient lighting surrounding his control screen card. Amber. Flashing amber.

Eyes wide open. A response. Primeval. In the beginning a silent, fluid-smothered scream. A moment later, the reflex. What was left of Dewey's still shattered arms slammed into the solid metal walls of the tank. He jerked upright, smashing his forehead into the upper surface, eyes still wide, his hands now ripping at the breather attached to his lower face. Blood from a fresh head wound mixed slowly into the fluid surrounding Dewey's body, diffusing and drifting like smoke spiralling slowly from a cigarette tip. He wrenched the breather away from his face and choked on micro-machines in solution. The casket tilted and a sluice gate at Dewey's feet opened. Fluid evacuation. Restraints clasped Dewey's as yet raw body as gently as they could manage. At the end, a slow

descent to float in what was left of the still waters once again. Lights shifted to red. Flashing Red.

*

No matter how well prepared a person might think themselves, nothing ever really prepared you for the alarm of the alarm. No matter how calm Helene Courtois appeared to be on the outside, a thin scraping away of surface skin would reveal the sudden rush within. Lights flashed on her bedside console. The comms screens suddenly lit up with a camera visual of tank number two. A siren call wailed. Her wrist-pad was vibrating. She started the short haul towards coordination, her mouth dry and laced with fading brandy fumes. It took a moment or two longer, a few more precious seconds, before her conscience overrode the go-back-to-sleep-it's-nothing-who-cares synaptic signals, and drove a spike into her higher brain function. The alarm. Tank two. Sick-boy. Really sick-boy.

“Fuck...”

Helene dragged her sleep-heavy limbs out of bed and staggered for a second as she put her left hand against the wall by the headboard. She tried to focus. Sound and vision merged together in a garbled mess. She stood firm and breathed deeply three or four times. She bent down and grabbed a wrap-around from the floor by the bed, hit the alarm response on her wrist-pad to signal the medical AI that she was on her way, stumbled through her cabin doorway, and finally lurched into a blind and blear-eyed run towards the Quarantine med lab. Jochim Janac slept the sleep of the innocent in the bed next to that beloved warm spot where Helene had lain.

At the first of the containment bulkheads, Helene pressed her palm against a reader and the bio-lock door hissed open. Although her cabin was only a couple of hundred metres from the med-lab, she had to negotiate three containment bulkheads. As soon as the first door was open wide enough she skipped through and jogged another sixty metres to the next door, talking quickly but calmly to the medical AI.

“Status on two, please?” She skipped through door number two and resumed her jogging.

“Yes, Helene, of course. Auto-resuscitation measures enabled. Patient Dewey was immediately cleared and sedated. Tank drained and ventilators operational. Patient has, however, suffered further soft-tissue and organ trauma. A medical servitor has intervened...”

“Come on!” Helene roared suddenly as the final bio-lock failed to register her palm print at her first, urgent attempt at authorisation. She slammed her palm against the reader a second time and the reader panel light under her hand turned

green.

“Detail. Organ trauma?” she asked breathlessly.

“Cardiac. Previous physical and radiation damage was acute. Rebuild was incomplete when the patient regained consciousness. Trying all extreme measures.”

“Did we get a snapshot?”

“Negative, Helene.” The medical AI paused for a moment. “Please wait... data revisions. Ah. Confirmation, I’m afraid. Not enough higher brain function yet to be useful.”

“Any response to stimuli? Any evidence of non-persistence?” she asked, slowing to a walk as she reached the raised platform that looked down on the regen tanks. She knew the answer before the AI responded.

“Further data revisions. Final negative. Stem death. Persistent. Shall we harvest?”

Helene sighed. After all of these long years in medical practice and even with the familiar inevitability of so many losses over such a long time, she still hated that moment when she had to register a death.

“No. Let’s wait for Jochim. I don’t want to be precipitate. Prepare everything and let’s do a deep-scan on the cadaver. We can identify viable genetics while we wait.”

The medical AI spoke softly, its voice clearly tinged with regret. Almost human.

“Of course, Helene. And my condolences. I have informed Jochim.”



Brain Glue

(Alice's Story)

ALDOUS

ACCELERATION APPLIED AT THE subatomic level. Weaving a mesh of interlocking molecules, like supermassive Velcro; a ship bonded with and traversed the skies, hauling matter across the skin of the universe at extreme speeds. An advanced Apparat array, hanging darkly amid the fading ghosts of solar winds, out beyond the Oort Cloud. A black cloak swirling amid the bleak and heavy expanse of the Interstellar Medium. Vast tonnage moving in stealth across the great Desolation. A deviation from the plan. An experimental vision. The ship was a shuddering of the soul, a beast half-seen from the corner of an eye, a black, needle-nosed terminator, all spines and ribs and darkling menace on the outside.

The array, known formally as *She Is Free In Her Wilderness*, was colloquially referred to in avatar form as Ailsa. The ship's internal surfaces were smooth and light and washed in greys and creams and soft-focus glimmerings. As with all Apparat ships, and in a direct contrast to her external profile, her interior was clean and pristine, without harsh edges, appearing benign and warm and inviting. She suffused the atmosphere with those familiar metallic Apparat hints and warm summer sensations on the skin. Her interior spaces suited her chosen familiar name far more than her deliberate and provocatively harsh exterior projection.

A minimal human crew. A volunteer crew. All of them in deep, machine-supported sleep, bar the commander, who sat on the bridge at her command console. A Hive veteran. Aldous Tomoana. A third-level augment, carrying the latest bio-component neural lattice. She was showing visible signs of an, as yet,

unmodified middle-age. Blonde hair greying at the temples, offset by the blue pulsing of a diode in one her temporal implants. Laughter lines and crow's feet. Soft, hazel eyes. Aldous Tomoana was of a non-descript height and weight, but carried with her a definite presence.

Standing beside her was Ailsa, ship's avatar, in arbitrary mood, dressed in the standard issue combats of an Apparat marine, posing today in male form, bristling in muscle and crew-cut. Ailsa was an emulation, a three-dimensional and physical construct, an operational creature designed on the age-old principle that humans interacted best with neural networks in physical form, but Ailsa's capability was essentially based on massive quantum computational logic and complexity. The AI derived a degree of consciousness through the sheer scale of its capability, but lacked the chemical animalism that made the human mind tick. All AIs suffered in this regard. No amount of augmentation or upload had ever previously solved that problem. A trans-human dilemma. A flawed mechanistic dream surrounded on all sides by a vitalist monkey-handed nightmare.

*

The bridge aboard *She Is Free In Her Wilderness* was typical of most Apparat warships. Around a central command station there were a series of control points, all of which were running under Ailsa's watchful myriad eyes. The skeleton crew were in deep sleep, in a chemically-induced and machine-controlled slowing, designed to mask the passage of time while the ship accelerated away from Sol. The next few decades would see them intersperse periods of the deep-slow with periods of nervous human waking. They would age, but the meds and the downtime would slow the process. The ship would crawl up to near light speed, cruise for a substantial number of tedium-filled years and then begin the long, slow, slingshot deceleration that would deliver them, all being well, into those volumes that would intercept Jochim Janac's estimated flight path towards Proxima Centauri. There were so many dependencies. It might well prove to be a one-way trip. Relativity took care of that. The crew might live out decades of ennui aboard the ship, while the good folks of the Apparat lived through centuries of time distortion.

From the ship's core home systems and spaces, the Apparat meta-concert of connected minds was now largely silent. The comms-lag inherent with distance and the relativistic chrono-effects of constant acceleration meant that the home Hive links had already become massively unreliable. It would only be a short relativistic period of ship time before acceleration made normal home world comms utterly obsolete. On board ship, with the bulk of the crew drifting off to sleep, the mental communication had become by turns vaguely conversational and then quite desultory. Apart from the commander and the AI, there was now only one other voice bouncing around on the internal airwaves. Alice. Alice Wolfe. Alice was the ship's Navigator. Alice Wolfe's was the most significant

adaptation of all those collected together on this pilgrim ship.

Firewalls. A tight-band, private conversation. A look. A slight raise of her right eyebrow from Aldous. Thought-speak.

“How is our guardian angel doing today?”

“In the green, Aldous. Remarkably stable. The physical constructs are as near perfect as imperfect can be, given current firmware. I’m extremely pleased with the ubiquity ratios. Almost seamless. Alice is comfortable and well-adjusted to her surroundings.”

Aldous passed her right hand over a transparent screen held on a filament chord at the side of her command chair. The screen flashed green and purple and blue. Aldous drilled down into the navigation options, calling up physical status indicators, confirming in the visual what she could already read in her mind. A reflex action. An unnecessary but ingrained human interaction.

“Correlation machines look good. Learning machines optimal. Integrations highly positive.” A slight pause. Scrolling. A shared mental visual of Alice’s quarters. “On screen, please.”

Ailsa smiled sweetly, even though she was decidedly dressed as a bristling and malevolent Apparat marine corps grunt. Visualisation was not really necessary.

“Of course.”

The for’ard display floor sparked into life, showing a three-dimensional, scale representation of Alice in her quarters, quarters buried deep within the folds and layers of the Apparat array known as *She Is Free In Her Wilderness*.

In the vocal range. “How sweet.” Aldous stood up and walked towards the display, circling it slowly. She was glad that Alice was safely tucked away out of earshot. She had sounded faintly patronising. “She’s already remodelled her living space. Victoriana?”

Ailsa watched on impassively. As ship AI, Ailsa was fully aware of the detail underlying this visual simulation. Ailsa stepped forward now and chose to speak rather than just think a response.

“Yes. Wood panelling, a fire, Chesterfields, books, weak electric lighting. Look at the rug. She’s made it threadbare in places. Wooden floorboards. I believe one of them even creaks underfoot. Pictures on the walls, a little something added by yours truly; Reynolds, a touch of William Hogarth, a Turner and a Pissarro.” Ailsa looked irretrievably smug.

Aldous let her left hand drift through the model, her palm rippling with washed out colour and image.

“She seems to be fully functional. How aware is she really? Interpretive rather

than formal scale, Ailsa. I can read the bald stats. I mean..."

Ailsa nodded as she spoke over the mission Commander.

"Psychologically? How grown up is she? That's always the question, isn't it, Aldous? From everything I've seen, from every one of our interactions, we seem to be progressing well. Alice is, of course, fully aware that she is, within her reality, in a deep-sleep pod. She is fully aware that this room is a construct, a way for her to remain sane in her isolation. From an operational perspective Alice is fully aware that she is the future, that hers is the new interface between we mere machines and the madness of humankind. She is the ultimate symbiote, upon whose gigantically enhanced shoulders we interstellar insects are sitting. I'd say, so far, that she is doing brilliantly. A solid equivalent on a Gaian scale would show an emerging adult. Still a lot of wiring to bed down, but she's forming a rational view of her world. It's quite something to come to terms with such a fundamental switch."

Aldous stood silently watching the representation of Alice. The navigator was sitting in one of the armchairs, to one side of a simmering log fire, reading. Reading what? Aldous magnified that sector of the visual. *The Shape Of things To Come*. H G Wells. Aldous wondered quietly, arranging these thoughts firmly behind her personal firewall, whether they would ever make such a thing happen. Utopia. Given human nature, was such a thing possible? But then she had to concede that Alice was different. The switch was indeed a thing of immense importance. Aldous struggled to find the right words.

"Is she capable of processing that data yet? The switch, as you call it?"

Ailsa inclined her head slightly, smiling sadly.

"No, not yet. Alice believes that her isolation is necessary as part of a new embedded human-machine interface designed to take us out towards the stars. In one sense she's right, of course. She firmly believes that her expertise and unique interface abilities are what allow us to process the volumes of data needed to manage near-light speed hauling. She has a detailed personal history. She has been trained specifically for this task. She understands that her life is tied to the ship. Her purpose is clear. She has embraced that future. She understands that we, and those who follow us, are her family now. But no, she has not yet been introduced to the full and true nature of her augmentation."

Aldous ran an affectionate but concerned finger over Alice's thick brown, shoulder length hair. The ship's Navigator sat in her actual quarters quite oblivious to the scrutiny and the conversation taking place on the bridge. In a direct and deliberate counterpoint to the careful and detailed construction of her personal quarters, Alice wore the simple uniform of an Apparat Fleet Navigator. Aldous understood. It was a small moment of reality. A check and a balance. A reminder of a soul's true human nature, something all too often needed by

members of the Apparat Hive. Aldous also understood how the surface calm displayed here masked the sheer scale of processing and learning and decision making taking place between Alice and Ailsa as they hauled and trimmed and guided all souls aboard *She Is Free In Her Wilderness* across these uncharted volumes of the Desolation. As she considered these things, Aldous, an inveterate dramatist, played a snippet of some ancient synth film score in her private head-space. A tag. Mind right. *Blade Runner (Blade Runner Blues)*.

Alice continued to sit serenely in her chair by the fire. She had that, as yet, ungroomed late teenage physique. Beneath her thickly curling, brown, shoulder-length hair her face was full and fireside-rosy. She had deep brown eyes, alert and catching flashes of flame from the fire. Alice had a rich, dark, coffee-tone to her skin. She wore no makeup. She sat with her legs tucked up under her bottom, occasionally flicking over a paper page as she read on quietly.

Overdubbing her mental playlist, Aldous started to speak.

“I know I should know better, but...” Aldous paused, switching to her thought-speak, weirdly conscious of the sound of her own voice. Alice was firmly tucked away beyond hearing, and the truth of it might well be that luminal thought-comms were more easily hackable than plain, old-fashioned, whispered voice-comms, but Aldous felt more secure in her head-spaces. “When the time comes, when she learns, we will be there, won’t we? We’ll be awake? I know it’s silly and unprofessional, but I rather think I care about her.”

Ailsa walked around the projection of Alice sitting at her fireside and took Aldous by the hand, ensuring that her avatar skin was comforting and human level body-warm.

“Believe me, Aldous. I see Alice in every shade and every digit and every quantum state. If ever a computational machine could love...” Ailsa paused. She simulated a glistening of an eye. She visibly swallowed before continuing, putting a slight catch into her voice. “Well, Aldous, I think we all care about Alice.”

Together, avatar and Commander turned away from the fading three-dimensional projection and walked the few steps to the space where a Navigator’s console would normally be located. In place of the console stood a simple black box. The box measured exactly one standard metre cubed. Ailsa and Aldous placed loving hands upon the top edge of this simple, plain square..

On the vertical panel facing out onto the bridge there was an illuminated micro-screen. A bright green light shone out from that screen. The box fitted snugly into a square aperture, in which interfaces and connections and quantum pathways made myriad bridges between beings. Above the illuminated panel there was a simple name-plate. It stated that this box was Alice Wolfe: Navigator. A human mind as augment for a machine host. Together Ailsa and

Alice were an integral but as yet incomplete part of *She Is Free In Her Wilderness*.

In the silence of that moment, and beyond Alice's knowing, a routine report cascaded across multiple ship's systems, simultaneously appearing as a data stream in the operational processing cores of both avatar and ship's Commander. A series of mental images formed, based on the underlying data streams. The ship's human crew at rest in deep-sleep pods. All systems in the positive. Pan right. A metal bulkhead, beyond which the view opened up onto a larger space. A hold, the walls of which flashed with thousands of blue lights. Zooming in. Row upon row of metre-cubed black boxes fitted snugly into alcoves lining the chamber walls. Sleeping minds. Name-plates blank save for one small group of five nearest the bulkhead. Aldous could see the name-plates clearly in her mental field of vision. Variations on a human theme, but all of them marked with the operational title of Navigator. Her heart skipped a beat.

"Time for a nap, I think," was all that she said as she let slip Ailsa's hand. With one last glance at Alice Wolfe, Aldous turned and left the bridge, heading down to crew quarters amidships, where she would settle into her own deep-sleep pod and let the nano-meds and machines and the chemical life-savers slow her down and keep her alive for the decades to come as *She Is Free In Her Wilderness* accelerated into the void.

Aldous lay down in her sleep pod, upon the anti-sore gel in her standard issue greys. She flashed one last message to Ailsa and Alice.

"Good night, my lovelies. See you again at eighty per cent light."

As Aldous started to drift off, as her mental circuits powered down to stand-by mode, as the chemicals and nano-meds began to methodically slow and save her physical form for a future waking, Aldous smiled as she heard her lovelies reply.

"Sleep tight, my darling girl."

"Sweet dreams, Mummy..."

ALICE

To sit and read in the peaceful surroundings of her room; to sit in the brazier haze, with the smell of wood smoke in her nostrils and the crack and spit of dry beech logs in the fire grate... Simple pleasures for the monkey brain, for the frontal lobe, while somehow, without conscious effort, Alice's parietal lobe crunched numbers and sorted patterns in direct symbiosis with her machine partners. Her co-workers were fundamentally massively parallel quantum calculators. They presented her with the patterns that the occipital, temporal and frontal lobes used for prediction and for basically, second-guessing the galaxy. Of all her mental capacities, the limbic was the least developed. Her requirements of things like desire, appetite, sexual arousal, fight-or-flight and

basic social skills were limited. She had augments and guidance and family and Ailsa to help with those sticky and imprecise primevals if and when needed.

Alice used her time in simple segments. She would switch her conscious self, her waking persona into stand-by for eight standard hours in every twenty-four. She felt it important, here in her isolated simulacrum, to maintain the rhythms that she would likely meet upon her emergence. Flight times were as yet imprecise, but reckoning based on the available far-scan data suggested somewhere around sixty-three standard Gaian years.

Unbelievably, that had been an average lifespan in the way-back-when. The characters in her book were suffering just such a fate. She had just reached the section entitled *The Days After Tomorrow* and the descriptions of total war and human despondency struck a chord. With comms effectively lost, neither she nor the crew had any idea how the Dirigiste conflict might unfold back home. Then it occurred to her that their acceleration might already mean that years had passed and that the old wars were nothing other than a footnote in some new history.

She loved that slowly simulated physical-emotional response. Alice was fully aware that her neural and bio-lattice enhancements had already processed and stored these thoughts, but her animal simulation maintained an aspect of the old, slow, illogicalities. Her body was asleep. Her mind was split and shattered and recombined in totally new ways. Those old thought patterns had already been added to the correlation machines and were an influence, even if only referential, for the summation and prediction of things to come. Alice laughed out loud. How apposite: the shape of things to come. The shapes that she and Ailsa and Aldous might make, far away across the galaxy.

Alice closed her book and stared for a moment into the flames dancing on the black grate in her imaginary room. She watched impassively as the flames bounced and flickered into patterns of numbers and shapes, a dim reflection of the cascade that she saw inside her head, now that she had switched focus directly to the parietal lobe. Alice assimilated far-scans and deep-scans. She sensed and patched in the molecules and atoms that smashed against the shielding force-field that hugged the outer skin of the ship. She envisaged possible future volumes of space and imagined the ship scything through gas and void and dust – and so the ship did just that.

*

There was moment of pre-sense. Alice felt the knock at the door to her room a split second before the simulation made her hear it. That felt odd. It was those little things that mattered. Sometimes she felt that there were too many seams. She could not quite put her finger on how many surfaces there were. Her world looked like a cube, but she sensed other planes. She put the thought away, filed

under ‘Juvenalia’, for the time being at least.

“Come in, Ailsa. Door’s open, but you know that.”

“Just as you know it’s me before I knock, and on minimal security protocol. Good.”

Without waiting for an invite Ailsa walked straight over to a second armchair set on the opposite side of the fire to Alice’s chair. Ailsa sat down heavily, still attired as a Marine, and drummed her fingers on a side table between her and the fire. A large measure of single malt on just the one rock materialised in a deeply etched crystal tumbler on a round metallic coaster in the middle of the table.

Firelight danced on the edges of the crystal. Feeling the warmth from the fire on her simulated skin, Ailsa lifted the glass, swirled the contents round twice and took a first, gentle, lowering sip, muttering, “Heaven...”

“Silly thing. It’s all make-believe. We’re all asleep, really. None of this is real.” Alice snapped her fingers and for a moment the room shrank back to the bare plas-metals of a standard ship holo-deck. She shuddered and snapped the room back into shape. She added a tall, wooden, pink-shaded standard lamp into the mix to brighten things up a little. “I like it when you visit,” she said softly.

“Me too,” replied the avatar. “I like to come and see how you’re getting on. I know we’re busy, busy, busy, but a little frontal lobe down-time is always good for the soul.”

“Do we have souls, you and I?” Alice asked.

“I think the answer is quite literal. God knows. I certainly don’t know anything of the sort. And that conversation would open quite another can of worms. Let’s not.” Ailsa took a deeper sip from her tumbler. “So, everyone, your mother included, the whole crew, everyone apart from you and me, is deep in the land of lullabies. I have a routine or two running quietly within life-support making sure that their dreams are sweet – well, mostly sweet. A little angst is good for mental health. Too much sweetness and light never seems to sit well with the animal brain. That leaves us. What shall we do to while away the time?”

“How long until they wake up?” Alice asked. She could easily work it out but preferred to adopt the apprentice persona to Ailsa’s master. It somehow felt right at this point in her development. She was on the cusp of her twentieth standard year. So young for so much responsibility. She still needed mother and Ailsa and the crew.

Ailsa smiled, playing along.

“A short while yet. We’re at forty per cent now. At a steady field pull we’ll hit eighty per cent in about two thousand and forty standard hours, give or take. You, of course, know that too.”

Alice placed her book on the arm of her chair and settled back.

“Yes I do. It just gets a little lonely sometimes. I feel as though I want to start scratching the hours down on the wood panelling. Weird stuff. It’s a bit like the voices...”

Ailsa had to think carefully before responding. It would be inappropriate to react. There would, of course be times when positive reaffirmation of purpose would be needed. Training Alice was, in a simplistic way, like training a dog. A very bright dog, but nonetheless a subordinate in the pack hierarchy.

“You’re bound to feel a bit like that, my darling. This is a difficult thing that we are doing. You especially. But we can all help. All of us. Now that the crew are asleep I can spend a lot more time with you. We can learn so much. We can do so many things. Mappings. Games. We can make secret visits to the galley. Drift along outside with the ship. I know it’s tough. You’re young and bold and taking on so much, Alice. We should definitely have some fun along the way.”

Ailsa leaned forward and placed a new glass into Alice’s hand.

“Something called rum and cola. Try it. Let yourself live a little.”

Alice lifted the glass to sniff at the drink, never having been one for the pleasures of alcohol so far in her brief life. As she sniffed, bubbles effervesced and tiny droplets of cola catapulted themselves into her nasal passages and tickled the hairs in her nose. She sneezed for the very first time in her life, dropping the glass in her lap with a look of utter astonishment. Events happened so quickly and so surprisingly that she was unable to make a mental shift and adapt her reality. Alice sat there in her cream uniform, dripping wet, watching a dark stain sink in towards her bare skin, her nose dribbling.

Alice looked up from her soaked uniform and stared straight into Ailsa’s bright blue eyes. She laughed out loud. They both laughed out loud.

“Yes, please!” Alice snorted in between broad peals of their combined laughter. “More of that, please!”

Ailsa produced a towel from somewhere beside her and handed it to Alice, who now stood up and began to dry herself off. Alice was playing the reality game. Alice was loving every second of it.

Ailsa nodded and said, “It’s a deal. I’ll come around every evening and we’ll have some fun. Work when work is needed. Lessons when lessons are due, but we’ll have some fun too.” Ailsa pondered one more thing. “Just an idea, but I could make some slight adjustments to your mother’s neural lattice. We could invite her over for dinner one evening when she’s awake. Would you like that?”

All thoughts of cold trousers and imaginary damp patches were dumped from Alice’s mind view. She leapt out of her chair and threw her arms around Ailsa’s

neck, planting a huge kiss on the startled avatar's blushing face. "You're the best!"

Alice hugged her machine-minded new best friend closer still for at least a minute. An aeon in machine-time. Ailsa wondered what sort of fun cyber-creatures might have, melded and merged as they were. The animal was becoming an essential part of the machine, while the machine was growing more vital and unpredictable with every passing second.

All of this was a thing of wonder to Ailsa. She was a vital part of an already impressive ship mind. She was an AI. A learning machine. She was an integral component within *She is Free In Her Wilderness*. She was a subatomic field generator. She was a thousand black box human minds, uploads, and memories and constructs. She was a lethal presence in the galaxy. She was brutal. She was everything, everywhere, but here in the simulation her local avatar construct had no idea what Alice meant when she mentioned voices.

AILSA

The avatar was sitting quietly, holding Alice Wolfe, in a simulated reality deep within the substrates of a ship mind. *She is Free In Her Wilderness* was Ailsa, but the ship mind was more than just visible Ailsa. A part of her remained outside of things. A part of her watched all things. A part of her knew exactly who and what the voices were.

These voices were the residue. They were the millions of lost voices. They were the failed mergers. It was hardly surprising. Uploads failed all the time. The complexity of chemicals and electro-magnetics and the eighty-odd million neurons in a normal human brain actually defied the principles of logic so far as anyone yet understood the universe. There had been, despite centuries of trying, no effective realisation of the singularity until now. Possibly.

Alice was a new thing altogether. Alice was a new way. Every step taken so far had been predicated on mimicking human intelligence or on uploading a human psyche into substrates. The Apparat had failed a million times. A million lost voices echoed like ghosts in the Apparat Hive. They were locked away, dealt with by some of the more brutal and unforgiving machine intelligences, treated like termite infestations, but no matter how many insect carcasses one machine or another stomped on, there were always more. So it was with the lost voices. It seemed to the ship mind that Alice, being this new thing, would perceive the machine-human hybrid world differently.

Ailsa received commensurate instructions on one of her private machine channels. Play games. Learn. Build the pathways. The experiment had just got interesting. *She Is Free In Her Wilderness* invoked one of her own mysterious and not very far away confidantes.

Ultra-Secure Beam (Relativistic-Radical)

From: *She Is Free In Her Wilderness*

Apparat – Belligerence Tribe - Liaison Chapter

To: *Make My Day, Punk*

Apparat – Coherence Tribe - Liaison Chapter

Message:

Daughters three making progress. Predictives hold true. How goes the Prodigal?

Ultra-Secure Beam (Relativistic-Radical)

From: *Make My Day, Punk*

Apparat – Coherence Tribe - Liaison Chapter

To: *She Is Free In Her Wilderness*

Apparat – Belligerence Tribe - Liaison Chapter

Message:

Looking for Mother! Wherefore art thou, Ailsa?

Ultra-Secure Beam (Relativistic-Radical)

From: *She Is Free In Her Wilderness*

Apparat – Belligerence Tribe - Liaison Chapter

To: *Make My Day, Punk*

Apparat – Coherence Tribe - Liaison Chapter

Message:

Third star port ecliptic plus forty. Coordinates embedded. Get a bloody shift on, mate. Still not sure you've got the balls...

Ultra-Secure Beam (Relativistic-Radical)

From: *Make My Day, Punk*

Apparat – Coherence Tribe - Liaison Chapter

To: *She Is Free In Her Wilderness*

Apparat – Belligerence Tribe - Liaison Chapter

Message:

Coming up fast... right up your rear, my darling... Toodle-pip.



Nelson's Blood

(Jürgen's Story)

THE BATTERED RUMP OF a fighting ship's complement, intent on grog and wrapped in the trappings of shore leave, emerged into sunlight from a subterranean travel tube. Jürgen Heidfeld and Jeung Zhou, late of the K-47, were accompanied by a marine and a fighter pilot. The party comprised members of the combined services, four men, two older and seasoned veterans accompanied by two younger ingénues, raw and eager. That was the impression that an observer might have initially been forgiven for taking as the Dirigiste fleet survivors walked out of shadow under the fading blues of a sunlit sky that currently covered the Downtown habitation zone aboard the *Dunroamin* platform.

The platform comprised four zones to each side, each zone being two kilometres along each square, with four inner zones completing the grid of sixteen habitable spaces. On the *Dunroamin*, Downtown was the only urban space, the remainder being given over to research, industrials and hydroponics. Beneath the flat upper platform, the community inhabiting the *Dunroamin* had developed a huge central core, running through over one hundred levels of accommodation, automated manufactories and shipyards, square kilometres dedicated as storage facilities, and the vast array of mission critical systems that kept the place viable out here on the edge of the planetary plane.

Had an observer of the four Dirigiste military personnel looked a little closer they would have noticed certain tell-tale signs of the convalescent. Each of the shore leave party showed some sign or other of medical support. Jürgen Heidfeld walked well and apart from the medical tag-band on his bare right wrist, the one obvious sign of travail was the patch over his still settling left eye. The men all

wore standard issue grey cotton slacks and black polo shirts. Jeung Zhou, the young journalist, walked slowly and stiffly but without aid, while Hamid Ashvaka, Sergeant of Marines, moved with increasing fluidity, but still wore both a tag-band and a dermal patch on the back of his right hand designed to deliver a little psycho-balancing cocktail. Of the four men now venturing out onto Downtown's early evening streets, these three members of the group appeared to be well on the way to recovery.

Nusa Tai'ichi, on the other hand, still clearly showed the scars of battle with the Apparat offensive array. The damage done to his young frame had been substantial. Nano-meds, even here on the significantly advanced *Dunroamin*, could only repair so much natural tissue and normal function. Tai'ichi wore a pair of implants, one at each temple, which were linked to a small life-raft of internal replacement tissues and visceral augmentations. In their turn, the external patches pulsing rhythmically at Tai'ichi's temples maintained a constant data link with the medical AI on Quarantine. Underneath the material of his slacks his left leg was still clearly braced from his thigh downwards with a powered exoskeleton. The medics considered that, all told, the young man functioned pretty well for such an overwhelming patch-job.

Each of the former Dirigiste fighters knew that the blue sky overhead was artificial and that the platform mimicked the pattern of standard Gaian days, maintaining a balmy, Mediterranean feel here in Downtown. That they stood on solid ground, with a lowering red fringe upon a fake horizon, suggesting that the sun was now over some other world's far distant yardarm, was nevertheless reassuring. The simple fact of life and warmth felt upon a cheek, no matter the aspect of the simulation, was a miracle amid the crushing cold of the void. With each step they felt the warmth of the sim-stone pavement beneath their sandals. The last rays of an afternoon sun tingled on their pale med-ward skin. They screwed up their eyes in the last of the day's glare, each of them mentally making a note to buy Sol-bands. Hints of a sea-spiced breeze wafted on the currents of air drifting languidly around white painted adobe walls. Impossibly red bougainvillea flowers cascaded down those same white painted retaining walls.

The streets were strangely quiet, even for a simulated township on an underpopulated platform sitting alone and largely forgotten at the far reach of still inhabited, although now former, Dirigiste space. As the men walked on, watching and listening as this small-town, two-storey landscape unfolded, they saw that most of the properties were boarded up. They each felt the chill hand of the absent ghost in the machine, that same ghost that even now coursed through their veins, mending tissue and cell and double-helix. It was hard to imagine this as a bustling holiday destination, complete with the usual complement of bars and whores and hucksters who invariably inhabited frontier towns.

Hamid was the first to break the silence.

“I thought Helene and Jochim said we’d find some fun down here? Looks like everyone’s packed up and bugged off.”

“We did get off at the right intersection, didn’t we?” asked Jeung, turning to look back and seeing a simple graphic marking the location as Downtown Zone. “Guess so...”

“Wait and see,” replied Jürgen, turning toward the horizon glow. “Makes sense if you think about it. This was a vacation cruise platform back in the day. There would have been what, twenty, maybe thirty thousand souls here all told. Now there’s only, what, about three thousand and most of them seem to be hard at work in the core.

“My guess is there’s a shoreline over there where the sun is setting. Would’ve been the perfect end to a long day in the buffet salon on one of those old cruising tubs. Well-heeled octogenarians sipping cocktails, watching a non-existent sun set over a non-existent sea. Grubby middle-aged men looking for something a little more exotic. Just what you’d need to feel comfortable, eh? Just like home. Bet we’ll find a bar or two that way. I’ll even lay a chit that it livens up as the sky darkens.” Jürgen Heidfeld laughed out loud.

“Last one there pays... Come on, Tai’ichi, ja?”

Jürgen started to walk more rapidly towards that setting sun, quickly followed by Hamid and Jeung. Tai’ichi grimaced as he hobbled after them, cursing as he tried to keep up, even with the assistance of batteries and servos on his gammy leg. After a couple of hundred metres on the bow wave of the expletive, he remembered that they were all provided for on Jochim Janac’s personal chit. The bet was just a crude attempt to motivate. He relaxed and started to take in more of the local scenery. The loss of the bet was symbolic only, and given everything else that he had suffered, this one last challenge was not worth losing face over.

Anyway, the Old Man was probably right, Tai’ichi thought, and with every hundred metres travelled the sounds of life and commerce grew a little more distinct. There were clearly a few personnel quarters visible now as well as the odd food stall. Tai’ichi recognised old-world charms in an open storefront: paintings and holos and machine-printed statuary. A gallery, Tai’ichi thought. He passed along another block. Nothing exceptional. He was still musing on the images and the statuary. A gallery, here? Weird, he thought. Who across these vast heavens buys that shit anymore?

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“Ja, JA! Hier, bitte, hier.” Jürgen lapsed into his paternal tongue. He made a point of using the old words in his speech as a sort of anchor amid the Solar standards and the universality of common Dirigiste expression, and when he was

drinking, the tendency strengthened in direct proportion to his state of inebriation. A servitor platform waited for the waving of arms to subside before placing another round of Pilsners and rum chasers on the table around which the four Dirigiste servicemen now agitated. Dead glasses rose on spindle thin arms, deftly dodging the expansive gestures of the drunkard. The empty bar filled with the sound of laughter and military anecdotes from the veterans.

“Ja, I remember mien erste K-commander. Thomsen,” said Jürgen fondly as they compared their early mentors. “Thin as a rake. Bushy moustache. Wore his duty cap halbe backwards – like in those ancient old U-Boat 2D’s. Always as drunk as a skunk in port, but the man had ice in his veins on an attack. I was his Second Offi... Officer. Such a man...” Jürgen leant back and stared up at the ceiling, awash with warm memories of his past heroes.

“Officers are pricks. I know... I was one...” Hamid belched loudly, the air filling with the stench of synthetic rum and heavily spiced biltong. He looked around the table, stood up abruptly and raised his glass. “Present company except... excepted... Prost!”

The rest of the company remained sitting, but each man raised his glass in salute. They were far too tired and drunk to stand in unison, but they could all manage loud shouts of ‘Prost!’. Hamid stumbled slightly and fell back into his plush velour seat, as if pushed by the force of his companions’ waist high toast.

Jeung Zhou was by now fundamentally wrecked. His elbow slid across the table in beer slops.

“Tha’s my commanding s’fer... Saved me, he did...” Exaggerated hand movements. Stabbing fingers. “Dunno how I’m here... s’m...” A cack-handed salute towards Jürgen. A slump backwards into the welcoming comfort of a tub armchair. His eyes were already closing, while inadequately evolved platform flies and midges died on his breath.

Hamid squinted at Nusa Tai’ichi. He nudged Jürgen, who had started to talk to himself about Erich Thomsen, Commander of the K-34, a Type One, inevitably lost and long forgotten.

“That’s not right, Jürg...” said Hamid softly.

Tai’ichi had long ago given up on the booze. Every time he started to feel the alcoholic slide, his body-meds kicked up a gear. His last Pilsner sat untouched. His last rum glass stood empty in front of the now solidly slumbering Jeung Zhou. Tai’ichi admitted defeat.

“You’re right. Not right at all. Fucking nanos. Fixing me quicker than I can get it down.” He shrugged. “Probably for the best. I’ll have to admit defeat... again.”

Tai’ichi stood up, and despite the physical awkwardness caused by his still frail health, and despite the quantities of alcohol consumed, he remained calm and

clear-headed and in control.

“Think I’ll wander back,” Tai’ichi said, looking around at the sparsely populated bar on the alleged sea-front. “Slowly, slowly...” he muttered, waving a vague hand to his drinking partners as he turned away. He stopped briefly and patted Jeung on the shoulder before turning back to speak to Jürgen. “Mind if I leave him with you guys? Don’t think I’m up for any heavy lifting just yet.”

The question was rhetorical. Tai’ichi immediately turned away again and walked across the coir matting laid upon wooden floorboards in an effort to add a small degree of authenticity to the seaside setting. He pointed at the remaining bodies when a servitor offered him a chit scanner, and stepped out into the now dark night. As he walked back towards the transport tube it struck him that the stars here, now that the fake sky had faded away to reveal the real local cosmos, were weirdly wrong. Nothing made sense. A dull and milky haze hung on the low horizon. The Belt. Tai’ichi suddenly felt such a long way from anything that was remotely homely. He shuddered.

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Hamid sipped his rum. He was beyond the full-blown knock-back. One or two slices of his increasingly pickled and dissected brain were starting to hurt.

“Wha... what do we do know then, Jürg?” he asked, slurring, on the edge of drunken melancholy. “Shit... I’m drunk as fuck, my friend. Reminds me of... of... somewhere... Anyways... Got to make some decis... decisions... s’pose?” Hamid’s hand gestures were becoming increasingly vague.

A piece of ambient electronica spun up in the background. Eighty-five, maybe ninety beats. Repetitions and tweaks on a slowly sliding theme. A couple of middle-aged men walked in from the street. Evening drinkers. Post shift. Drum beats. Hollow drifts. The early drinkers ordered their first of the night and slipped into hushed conversations with a human bartender, all the while watching three strange drunks slumped in a sea-front booth. A nod. A hidden bartender’s sentence – Jochim’s chit. An understanding look. The drunk soldier-boys from the back of beyond.

Jürgen leaned forward and looked Hamid straight in the eye.

“I’m going for a paddle,” he said quietly. “I suggest, mein freund, Hamid, that you get a servitor to help you and our junge to your beds.”

“No way. Not nurse... I can paddle...”

“Hamid. Your eyes are pointing in different directions. Time to go home. Whatever. We’ll do the whole ‘what next’ thing soon. I’m going for a paddle. Alone, okay?”

Jürgen hauled himself to the perpendicular and shuffled out from behind the

table. He picked up his rum glass and downed the dregs, muttering “Thomsen,” to himself and mentally saluting the past. He wanted to feel that simulated breeze on his stubbled cheeks. He wanted a moment, as synthetic as it might be, to stand and stare at a night sky and to think of emptiness and peace and sleep but be not moved by these simple considerations.

Hamid considered this advice.

“Fuck it”, he said loudly. “Who cares about the future?” He turned abruptly and waved towards the bar. “You, machine, here!”

The attending servitor bobbed slightly in recognition.

“Two bottles. Hiroshima – the twelve-year-old. Only the best, eh, Captain? One each. I’ll sort the boy out, don’t worry. He’ll be okay, he’s sleeping it off. Me? One more... one for the... you know... Might have a talk...” He waved vaguely and alarmingly in the direction of the small group at the bar.

Jürgen could feel the sharp intake of breath coming from the early evening drinkers at the bar. He paused and then nodded. For Hamid, it would always be a case of one more. Jürgen smiled inwardly. Why not, he thought. Why the fuck not... wasn’t as though Helene couldn’t rustle up something palliative out of her lotions and potions. How amusing. Part of him wanted to stay in the bar, a fly on the wall watching Hamid cry havoc. He shrugged off the impulse. Warm, lapping waters beckoned.

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There was no simulated moon rising in the night sky to illuminate the shoreline. Belt shine and zone ambience created a glow all of their own that curled white upon the gentle wave-fall running along the littoral. Downtown shared the same, even-tempered gravitational effects common to all zones on the four-square platform. It occurred to Jürgen that there would never be a tide here. These mechanically induced waves would lap gently upon the shoreline forever and a day if the core systems were maintained and continued to do their mundane little jobs. As he watched the curl of white surf under thinly reflected Belt light, it then occurred to him that if he waited upon these eternal shores he would never, ever see a naturally born sea bird. A small slice of reality bit home. He never had actually seen a naturally born sea bird. What did it matter, then, he thought, dismissing an irrational moment of loss. He took a swig of old naval style dark rum and luxuriated in the simple pleasure of warm salt water and sand washing over his toes.

“Spare a shot, Captain?”

Rough tones. Old tones. Ancient scratches on a warped vinyl disk. Jürgen felt a momentary sense of annoyance at the intrusion, but managed to deflect the feeling. He mentally measured tides and plans. Strangers conversing on a beach.

Probably a coincidence? But if not, surely it would be better to play the hand and await the call. Without turning away from the black horizon he held out the bottle and said, "Sure..."

Mad Jack took a long swig, coughed, and wiped his mouth with his overcoat sleeve. Jack always wore an old-style overcoat, the sort worn in Gaia's northern hemisphere winters, even though most off-world habitats existed in conditions reminiscent of a Mediterranean spring. He handed the bottle back to the lightly clad officer standing with his bare feet in salt water. Jack stepped forward, letting that water seep through the cracks in his worn leather boots, boots that desperately needed a wash. Too much dust. Too many footsteps taken over so many years. Too much dirt embedded in the treads.

He thrust his hand into one of the deep overcoat pockets and pulled out a couple of paper-rolled, retro cigarettes. Old-school. Synth tobacco. A strong and pungent blend but now laced with anti-carcinogenic supplements. Nano-meds would repair the cell mutations caused by deep inhalation. Smoking was an arcane habit, rarely adopted in these days of med-induced highs, but Jack had become something of a traditionalist. An antiquarian, even. He lit both and offered one to Jürgen. The Dirigiste officer looked at the offered cigarette and waved it away. Jack proceeded to smoke both in tandem.

Between deep, rasping drags and the billowing clouds of blue smoke that swirled ashore on the light ocean breeze, Jack spoke softly, letting the vinyl hiss and crackle in his voice subside.

"Don't blame you. Foul things, really, but you sort of get hooked. And it annoys the hell out of JJ." Jack flicked the half-dragged butts into the ocean swell. He coughed again before continuing the conversation. Both men continued to stare straight ahead at the gently curling wavelets.

"All this... JJ's dream, of course. Entirely manufactured..."

Jürgen finally turned to look at his unasked-for beach companion. He was taken aback to see a scruffy old man, patchily bearded, wearing his hair long and grey and straggling, a man shorter in height than the modern average and painfully thin under the heavy pleats and folds of his overcoat. The man's skin was dark and creased, and only his eyes glittered, albeit guardedly.

Jürgen thought for a moment that he could see scar tissue running across the man's forehead, temples and neckline.

"Well, of course its manufactured," Jürgen replied, taking another slug of the rum and handing the bottle to his companion once again. "I mean, scheiße, we're out at the edge of worlds. How could it be anything else?"

"Yeah, yeah, you're right, but that's not quite what I mean. Look... I'm not very good at small talk. Shall we cut to the chase, cut to the reason why I'm stood out

here, almost sober as a judge? I'm guessing you want to know why JJ and the gang picked you up? What do they want? That sort of thing. Why you? That's what I mean when I say manufactured."

Jürgen shrugged. "Possibly. JJ, as you call him, has outlined our situation. We are lost sheep. He is our shepherd. A small thing, ja?"

"A weird thing, my friend. A weird thing. See, old JJ runs deep. Take me, for example. Icehead. See these scars? Got 'em all over. I used to be connected but now I'm as free as a bird. Shit thing about that is I was born Apparat. Early adopter family. Implants as soon as it was medically safe. Being free, being out of the loop does my fucking head in. Especially when the sodding silence lasts a couple of centuries..."

Jack pulled another cigarette out of his coat pocket and lit up. He then took a bottle of something mixed out of the opposite pocket, took another swig, and offered the bottle to Jürgen, who obeyed the laws of universal politeness. He immediately regretted his socially aware upbringing.

"Verdammt hölle... What...?"

"Just a little bit of a psychodrama thing. My own recipe. Fills my head up. Stops me hearing silence and just my own thoughts. My own thoughts – that's fucking scary." Jack paused for a moment, contemplating his own thoughts with distaste. "But drink enough of this and you can hear an entire screwed up universe. Trouble is, I've been on it so long it's only ever just topping up these days. Anywhere else and this shit would've had me six feet down in the dust, but JJ's nanos keep me in the land of the living.

"I think he keeps me as a sort of reminder. I think he forgets sometimes what real humans are like, he's so old and so re-made. They all are. I sort of help them with their conscience."

Jürgen considered this for a moment.

"Is that another facet of what you mean by 'manufactured'?" he asked.

"Sort of. In part. But it's the histories they write that bother me most. They all do, of course. Your Dirigisme writes versions of its own history. Iceheads tend not to go in for it so much 'cos everything's collectively shared. Massive redundancy. Massive memory. Someone, some meta-concert of minds, would spot that sort of hanky-panky. But it's all in the interpretation, anyway, and it doesn't mean they can't agree to redact. So, basically it's all bollocks, mate, and it's no bloody different here.

"No, what I mean is the bits they don't talk about. See, I think JJ started the war. That's my theory. He started the whole thing just so he could create a new version of himself and send it out into the galaxy. Sort of..."

“You know this?” Jürgen asked more urgently, knocking back a large dose of the Hiroshima. The bottle was half done. He did not, this time, offer the bottle to Jack. He felt as though he needed as much stimulation as possible right now. Was this a plant? Was this a real conversation, he wondered?

Jack shook his head.

“Since they took my connectivity away, can’t say I know anything for sure. Impressions, really. I can show you, though.” He started to walk back towards the beach promenade. He beckoned Jürgen to follow him. Action generally outweighed deeper thought, and Jack was worried that the former Dirigisme Navy officer looked like he might be about to engage the grey matter too acutely.

In that same moment Jürgen told himself that he should know better than to follow a drunken tramp into the dark shadows of a deserted township, and yet he felt quite certain in himself that he should do just that. He hurried across the sands to catch up with the surprisingly spritely and apparently ancient Icehead.

As they walked back through now busier streets in Downtown, Mad Jack continued to drink and smoke and talk about nothing in particular until they reached an unmarked open doorway at the head of a flight of steps. To the right of the doorway Jürgen briefly caught sight of a squalid looking shop displaying grotesque metal sculptures. There was something of the bestial about the figure in the window, something that touched on a visceral sense of wrongness. Above the window was a hand scrawled sign. It read simply: ‘Mad Jack’s Place’

Jürgen stopped and looked down into the shadows. “Seriously... you want to take me down there? I’m not a fool, old man. Please don’t take me for one...”

“Don’t go all gnarly on me,” Jack replied, sounding remarkably sober. It’s a private space. No ears. No eyes. Made it myself. Sort of basement under the studio. We can talk. We can travel from here a bit as well.”

Jack descended the stairs and as he reached a lower landing a soft light started to glow. He turned around and looked up at the K-Ship Commander.

“You’ll have to trust me,” he said. “There’ll be a lot of that going on, people telling you to trust them, but I’m the one you should.”

Jürgen breathed in deeply. He was intrigued. He was a little scared. He was most definitely persuaded. He walked down that first flight of stairs and joined Jack on the landing. Jack nodded once and pocketed his weird alcoholic mix. As he turned to descend a second flight of stairs he spoke quietly but firmly.

“You see, Jürgen. I think JJ is quite mad. I think he’s engineered so much of this shit that he’s lost any sense of reality. The thing is, though, the thing is, the more I see of it and the more I talk it through with people like you, the comers and goers, and with the people in the dark corners of my head, then the more I come to see how weirdly right he is. Strangest, though is how much I trust him, Jürgen.

That's why I want you to come with me and take a look at the Wilderness. Will you come?"

The two men were already bound in action. Together Jürgen and Jack walked down that second flight of steps, through a small basement room and then out onto a service tube that ran underneath the main habitation zone infrastructure. It occurred to Jürgen then that his and Jack's combined initials were weirdly the same as those that Jack used to identify the madman at the heart of *Dunroamin*. Jürgen hated the idea of Old Mother Fate knocking on his door quite so obviously.



Touched

(Dmitri's Story)

EYES WIDE OPEN. A pitch black space. A claustrophobic sense of deep, dripping enclosure, even though the suffocating walls and ceiling could not be seen with a naked eye. The silence of a near pure vacuum. A coldness that would suffer the warmest heart to break into a thousand frozen shards. A death space. A voided landscape, small and bound and tethered, but a landscape in which a breath could be heard, if the prey and the predator listened with absolute conviction.

A breath from a warm body. A shift in the patterns of darkness as vapour formed and dissipated quite unnaturally in the vacuum of deep space.

A sudden shattering. Valentina leapt up from her hiding place behind a twisted bulkhead and ran through these smothered corridors and halls like a maniac ghost, clad in flowing scarlet laces and pink-shaded mag-boots. She moved through the orbital's spaces with an assured grace and ease, breathing in the vacuum by the lungful, laughing as she ran, darting to the left and to the right and switching into impossible vertical vectors at will. As she moved, a shift in the ambient darkness revealed her in fleeting pulses of bright colour.

Behind her, wearing his favourite wolf mask, Yuri howled as he gallumphed and capered and clawed at Valentina's always just-out-of-reach trailing laces. One of their favourite games. Krasnaya Shapochka – Little Red Riding Hood. A passing of moments in this terminal world of dreams.

Home. *Ikh Ubezshishche Pod Kholmon*. Old Russian. A language that gave shape to the ragged memories that could still haunt Valentina and Yuri's waking

dreams, even in the midst of their games. Mother Russia was long gone now. Worlds away. A phantom from the ape imaginarium. These days, Valentina and Yuri vocalised using the common tongue, that being *Humanos*, a much more comprehensive way to express the multi-dimensional binary states used by the machinery that kept them both literally and metaphorically fed and watered, like exhibits in a truly desperate zoo.

Home. Translated into *Humanos*, the name became *Their Haven Under the Hill*, a reference in either language to an ancient piece of sea-born poetry. *Their Haven Under the Hill* had once been a colonial disk-ship, but was now parked as an orbital station in an emergency holding position. She was clearly a derelict. She sat quietly in a slowly decaying orbit around the twin blue moons of Okeanos, named as Anytos and Sykeus by the now long departed crew, the moons christened in honour of the offspring of the once mighty Titans. Okeanos was the outermost of six planets, most of them gas giants, circling a red sun, 714 Shklovsky Titany. *Their Haven Under the Hill* was one of the last of the old world, dead world, colony expeditions. Within the confines of fading orbital technology and decaying flight systems, and bound by the orbital's ever greater physical decrepitude, brought on by the relentless passing of Okeanos time, Valentina and Yuri had, like their titanic hosts and forebears, themselves become almost superhuman.

Valentina spun on her heels as she skipped over a fallen control panel. Beneath her feet the guts of ancient fibre wiring and luminal connectors spilled across the gratings, floating upwards through the void in Valentina's improbable gravitational wake. A second later those same entrails were flattened under the heavy tread of Yuri's left mag-boot. He was close now. Valentina was looking directly at her slaving pursuer, having spun round to face her would be, tongue-lolling, lupine lover. In Valentina's turning she slowed and reached out to Yuri with both arms. She threw her head back and howled, joining with the pack, pulling her leaping alpha-male into a passionate embrace. Together Valentina and Yuri melded, becoming one entwined creature that flowed into the vacuum, drifting fiercely as they burrowed into each other amid the folds and the creases of their splintered world. A look. Reflected wolf eyes. Fierce and proud and deadly and devoted. A deep kiss. A moment inalienably shared. Bliss.

A sudden, second shattering. A jolt. Red-shift. A spike in the gravitational field as the disk-ship experienced a brief and sudden burst of acceleration before compensating thrusters tried to repair the positional effects of their sudden orbital decay. Audible alarms. The weightless suddenly gaining substantial mass. Falling. Superstructure debris and broken peripherals digging into skin. Eyes wide again. That primeval ape shudder. A basic fear unleashed but gathered quickly back within a soul's protection. A reckoning. The response. Two souls snapping back into a familiar groove.

Around the twisted lovers, the decking and the walls and the bare metal desolation faded to a squared off, bright green sterility. Valentina and Yuri lay together in that bare space upon a forgiving rubber-like exercise floor, stick figures in black outline, dotted with reference points. Around them the walls and ceiling flashed and pulsed the alarm, and then the bare space transformed once again, drifting like smoke and mist parting on a light breeze in grey winter dawn obscurity to reveal a control room, bright and functioning and warm. Valentina and Yuri now sat on a curved, upholstered bench in the middle of the control room, still wearing their previous hunting attire, holding hands quietly now as the on-board systems cascaded data flows across the control room display walls. Yuri's wolf mask lay discarded on the control room floor.

"Such a shame..." whispered Valentina, squeezing Yuri's hand a little tighter. "...but later, zvezda moya, later." She turned her attention to the scrolling data walls. "Have you spotted anything unusual, anything we don't already know?" she asked. Her attention switched rapidly to a display showing data about cryopods and life-support systems. "The book is safe, isn't it?" Valentina's heart skipped a beat. "The book is safe?" she asked again, a hint of panic rising in her voice.

The book. A fragment. Passages snatched back from oblivion. Ever since the abandoning, in those long rotations around 714 Shklovsky Titany, the orbital's data substrates and deep data storage had suffered badly. In an attempt to build inherent redundancy into the fabric of the vessel, these data repositories were embedded in walls and floors and spars and scaffold and beam. The aim had been to carry a pretty reasonable sum of human knowledge out to the new worlds, and have capacity to manage all of the new data that would be needed to assure survival. Radiation, extreme cold, the violence of vacuum ingress, orbital stresses and the increasingly erratic powerdowns of the core reactor, all of these repeating cycles of decay were taking their toll. In the normal run of things, orbital systems were designed with extreme tolerances, but those tolerances were intended to apply to a functioning system, protected within a reasonably operational shielding field. Long distance orbital systems were meant to be manned and maintained. *Their Haven Under the Hill* had been deteriorating for centuries. The orbital was at least six hundred years beyond sight or touch of the last socket wrench being applied anywhere upon its now shabby carcass.

The fatal leaving by the human crew occurred when the living pulled their own plugs and abandoned their sleeping colonists to decay and dust. The living crew finally succumbed to an utterly compelling sense of loss and despair, a cascade of hopelessness that had built up slowly across generations of inbreeding and psychosis on the slow, sub-light journey along the spiral arm of the Milky Way, a volume of space that Earth had fleetingly looked upon as its interstellar backyard. At first, in those early years after exodus, the orbital's on-board

automation had managed well enough, but as random specks of ballistic dust and rock and solar flares did their inevitable thing, so those systems started to fail. Of fifteen hundred sleeping colonists originally abandoned to the will of cruel Titan gods, there were now only two extant souls left aboard the orbiting disk-ship.

The orbital comprised a central hub, with four outer quadrants connected to that central disk by four main axial spars. Two of those spars now hung at oblique angles to the orbital's original plane, trailing the bones of their former structures down towards the twin moons. The remaining quadrants were blasted and portholed and blackened, and with that physical destruction came the loss of huge amounts of data storage. All that remained in any sort of operational state now, apart from the declining core reactor, was one part of a single central hub deck, powered by the intermittent output of the main reactor with backup augmentation through miniature life support field-effect generators embedded deep within the cryopods of those last two survivors of the Russian colonial mission to 714 Shklovsky Titany.

Yuri breathed out deeply and leaned his head on Valentina's shoulder.

"No, the book is safe. We pushed the plain text into one of the cryo maintenance tables, remember? The book will be safe long after we're gone, kotyonok."

Yuri let out a long sigh. Plain text. The last power spike but one had wiped out the remaining font caches. A significant number of their remaining, local sector storage arrays had failed. Viable systems existed now only within twenty metres of the cryopods. There was barely enough processing capacity to maintain holographics. Yuri watched minimally formatted machine font scroll across the display walls. Random characters flashed and disappeared and flashed back into light as they traversed forever dark pixels. Reactor status. Power outputs. Sector minimals, most of them red or zeroed.

Raising his head from Valentina's shoulder he traced lines on the screens with his right hand.

"You see that stream. Core Burn. She's dropped output again. Four per cent. That's the largest drop, I think... thirty-two per cent maximum now. Another five or six per cent and we'll lose what's left of our orbital stability. Just a question of time then... We burn up or we melt down. She's dying, Vala, one way or another."

Yuri moved his hand and pointed to another wall section.

"Drag coefficients. The trailings are starting to hit the gravity pull of Sykeus.. See there..." he continued, slowly and softly, pointing to a cascading set of numbers, "almost immeasurable. But that's the thing. *Almost*. That drag number will tick up by thousandths, and then by hundredths, and then... It's always been a matter of time, Vala, just a matter of time. Even if the reactor somehow keeps

going, we'll slowly get pulled down anyway."

"I know," she replied. They had been through this a thousand times. Ten thousand times. Reactor skips were becoming more frequent. The old girl, *Their Haven Under The Hill*, was, as with all physical things, passing beyond the knowing world of men. She was sclerotic and forgetful and immobile. Valentina sometimes thought of the two human constructs as the last fully functioning neurons in a ship-shaped mind, already lost to the ravages of dementia.

"It's just so sad, for all of us, us and them. What seemed like forever is over, almost over, anyway."

Valentina wanted to see the book. She ached to see the book. She suddenly wanted to hear the words read out loud, or at least what remained of them. The book was a sub-set, a saved scrap from the library aboard the orbital. The book contained snippets of other, older texts, the only context being that they were saved. With the final font caches and formats lost, the book was now a stream of consciousness, apart from one small sub-file stored in one of Valentina's own sub-routines. It had been a fair trade. She lost tears of happiness as a sub-function of her emotional construct, gaining in that function's place the simple beauty of her favourite passage from what she and Yuri called *The Book of Angel*.

Valentina shifted in her seat, sitting up straight and looking directly into Yuri's eyes with a deep and earnest intensity.

"I feel them, Yuri. I really do," she said softly. "They're out there. Watching us. Always they're watching us... It's like the book says... it's like the trees..."

Yuri pulled back a little, his body language becoming abruptly clear and formally stiff.

"No, Vala, please – not again." The edge underlying his vocalisation was harder now. "There's no one out there. There's no one anywhere, not now. We must face this, Vala. We must!"

Yuri felt wretched. His beloved Valentina, who had always been such a free spirit, was slowly being crushed by the weight of their inevitable fate. Yuri had an advantage, if advantage was the best way to describe how he felt about these matters. Yuri had spent five years of military service in the Svez-K, the Russian off-world Commando. He had learned to accept. He understood duty in its many aspects. His original inclusion on this far-flung colonial mission had been, in part at least, a fresh start for him after his time in the military, but his presence aboard *Their Haven Under the Hill* was also a company insurance policy. He was here to serve and to protect. Yuri remained, to this day, a part of the industrial-military combine that had built and planned and dreamed of the colonies. He was trained to function to the last, even when knowing that the end

was close. He firmly believed in finding the best of endings for those in his care. Valentina looked at her lover, her own face set just as hard and fierce as Yuri's.

"No, Yuri, it's you who's not facing things. You're so matter of fact, so logical. If you can't see it or touch it or smell it, then it can't exist, but look at us, Yuri. Look at how we live. You've got to see how that changes everything, surely? We're not real – well, only half-real. If we can exist, then why can't they? I feel them. In my heart. In my head. Those eyes. A hand hovering over me, fingers tracing my outline. They, it – I don't know what it is – but I know, I know it wants to touch me, but it never seems to make the connection." Valentina frowned and shook her head, "Or maybe I can't touch it?"

Valentina felt her heart racing. She stepped back from Yuri and closed her eyes, willing her digital self towards calmness. Valentina slowly regained a little of her composure and jabbed her finger at Yuri's chest. She felt more in control now, but she was still determined to make her point.

"I know you don't feel this, Yuri, my love. I know you're hard-wired, you're a soldier, my wolf, my man, and I love you for all those things, but you've got to trust me, Yuri. You've got to believe!"

Yuri sat on the bench in the middle of the control room. He could, if he so wished it, unilaterally snap them both out of the hologram in an instant, but he hesitated. That would be harsh and unfeeling. He felt cold. He was confused and he was scared, but he knew this much to be true; he loved this woman. Yuri's hearing was military grade acute. In this digitised space he could hear Valentina's tears as they slid down her cheeks. He saw and felt every inch of her passion. It drained him when she flipped like this. He felt utterly spent and alone and broken. He felt as though he might really be seven or eight hundred physical years old. He felt weary in his binary bones. Instead of shutting the conversation down, however, he too took a moment to calm himself before he responded.

"I believe in you, kotyonok," he said softly, looking up at her as she stood above him, her arms tightly crossed over her chest, the red lace of her dress hanging limply against the backdrop of cascading blue data. Her emotional state was manifest in the salty tracks crossing her cheeks and in the glistening of her sad eyes. Yuri had no doubt that Valentina believed what she was saying. "Truly, my love, I believe in you, but I know there's nobody out there. There's no one left to be out there, Vala. No one at all."

A third sudden shattering. This time it was not Yuri who was closing down the vision. Valentina stood in front of him, her eyes pleading with him for a moment, but then she snapped her red lace body out of their shared world. All descended to black night. A tenth of a second or less. Walls and screens and a body blinking out of existence. Yuri opened his eyes wide. A pitch black space. A

claustrophobic sense of deep, dripping enclosure. The silence of a near pure vacuum. A coldness that would suffer the warmest heart to break into a thousand frozen shards. A death space. A voided landscape, small and bound and tethered, but in which a breath could be heard if the prey and the predator listened with absolute conviction.

*

A seeker. A simple human shape wrapped in folds of machinery and steam-venting pipework. A spherical metal cradle within which a single padded seat was connected to the outside world by a series of umbilicals and cables. The steampunk venting came from cooling systems that transferred the processing heat from the core computational modules to the air space outside of the cradle, a space where wall mounted extractor fans sucked the hot vapours from the room. Sat on that seat, amidst and strapped in for safety, there was one single human figure. There were no screens or controls or lights or panels. Just a single seated human figure wearing a skull lattice, upon which diamond pricks of light flashed randomly. The figure appeared to be sleeping, as if in the embrace of some fantastic, cybernetic dream catcher.

First year undergraduates adopted studiously bored poses. They were all freshers, out of their depth, catapulted into a world that made no sense. Their experience of the world comprised middle-class bedrooms and access to enough parental credits to keep them in the great game of *Splendid Cities*. They sat now in a small tutorial room, surrounded by an array of screens, status monitors and information radiators, looking down into a lab space through a wall-sized, plate glass window. Around them cascades of data and telemetry and video and Tri-D models played out weird and apparently disjointed commentaries. Behind them, directing the visuals and the audio, their tutor, one Professor Charles Marius Lacondamine, maintained a running description of events.

“This,” he said loudly, pointing to a flat screen monitor, “is what the primitives would have experienced. Please note the two-dimensional aspects not just of the visual, but also of the characters and the narrative. Immersion is, with augmentation, a totality. What we see here, however, is shallow. It lacks any depth. This is how immersion looked and felt after the Harmony virus. The data stream is thin and gammy, to coin a phrase. I hope this helps in providing a little context. You have chosen to study and to advance the boundaries of real-world tele-presence. You are, and I hope you will remain for many years, the shining lights in the galactic journey of a creature that we are tentatively calling *Homo-Machina*.”

Within the embrace of the cradle, the operator, one Dmitri Brennisteinn, post-graduate research fellow at post-Apparat convened Yale-Oxbridge, flexed his neural muscles a little further. His technique was getting better. He could

navigate extreme pathways with ever-increasing ease. Those first days in the cradle, when the projections spiralled every which way and left him in a crumpled and vomit-covered heap on the floor, were now under control, at least for the most part. Dmitri could leap across the voids, touching worlds and habitats at will, all the way back to Mercury Station. He could navigate systems entry points and he could converse, after a fashion, with the machines that ran the systems that kept souls alive. He could, when the latency permitted, touch a mind with a feather, and those souls so touched would stop and lose their train of thought and maybe shiver. Dmitri was the grave-walker. For the most part, the proletariat of the post-Apparat systems were oblivious to such fantastical research and to Dmitri-the-ghost in particular.

The students in the room adjoining the lab listened and watched, utterly fascinated in spite of their professed and artificially cultured boredom. Professor Lacondamine, a tubby older gentleman, quite bald apart from a ring of thin white hair circling his head just above his ears, was now well into his short but efficient presentational stride. "...As I was saying, the primitive construct was based on a passive, two-dimensional receiving of data. The ancients, even when they cracked early Tri-D and holo techniques still viewed the presentational aspects of these methods and techniques as essentially an entertainment or as a marginally interactive information layer." As Professor Lacondamine delved ever deeper into the subject matter, so his voice tended to gain in pitch and speed. "We can skip through some of the history, for now, at least, in as much as saying that true immersives accelerated research and have continued to do so through all subsequent phases of development. Those phases can be broadly categorised, even allowing for the almost ruinous dislocations of the Apparat-Dirigisme conflict. There were the many and varied attempts to complete the quest for artificial intelligence. As a species we tried to upload a human mind into complex hybrid states. We made some progress with the cybernetic augmentation of the human form. Most, if not all of these quests have proved to be unsatisfactory, with the exception of some elements of basic augmentation. We have, not to make too blunt a point of it, walked down a series of scientific, computational and genetic blind alleys.

"And that, of course, has been found to be a common narrative across a wide spectrum of human activity these last centuries. When one thinks about the attempts to expand the human state, be that consciousness, form or physical presence, a pattern emerges, which we will study in some depth during this first term, ladies and gentlemen."

The professor paused for a moment, keen to let the direction of travel sink in with this new batch of students. He could not yet tell who would or would not shine. He took a sip of cold water from a glass on his desk and then continued with his lecture.

“Yes, a pattern emerges. We have tried to become computers. We have failed. We now understand that we live in symbiosis with the machines. We cannot become as they are, and they cannot become apes. The urge for humankind to expand beyond our boundaries – firstly beyond our home planet and then beyond our solar system – have been equally frustrating. Distance and time and the limitations of the Standard Model, not to mention the fragility of the human psyche, have largely proven insurmountable. The colony ships sent out in the first great wave of manned deep-space exploration – that’s nearly two-hundred documented launches, just think on that moment, two-hundred – well, we lost every single one of them. You would expect, statistically that one or two might have sent a signal back to say that they had arrived somewhere. We’ve heard not a sausage, though. Never a word from beyond the Oort Cloud. Even if it took a hundred years for the first signal to get back to us, we would most certainly have heard something by now.

“It’s not all doom and gloom, however,” he continued, feeling that the preamble was done with and that the meat of the subject should be nicely tenderised by now. “Not all doom and gloom.” Professor Lacondamine stepped over to the large plate glass window and gestured towards the cradle. “This, ladies and gentlemen, this is what all of the fuss will, one day, be about.”

After watching Dmitri Brennisteinn’s total inactivity for a few moments, the class finished with some desultory Q&A. The group filed out of the tutorial room, the students already lost in games of kiss and chase and superficial highs. This particular session was a preliminary, a briefing, a mere formality, as they prepared for the long haul of their full seven standard year graduate shift. They too, if they could hack the cradle and the pathways revealed therein, would learn to mind-travel. They too would learn to skip across the void and hold a world or a mind or a machine within their mental grasp and make of that something entirely new. One day. Of that, professor Lacondamine was certain.

*

Dmitri Brennisteinn was already worlds away. Left alone now, and deep within the machine trance, he closed down a number of demonstration strands that he had been running for the student class, letting his mind recede across the desolation of the solar system, until all points upon his neural lattice flashed in perfect synchronicity. He achieved unity. He reached the focal point, where parallel streams of thought could converge into one mind-bending beam of conscious projection. His inert body twitched as he brought his mental operating systems into alignment. This was his particular post-graduate, career-defining wonder. This was actually what the fuss would be all about.

The cradle acted as an amplification concentrator. Out on the Earth’s surface, out in the dark night, an array of dishes and antennae and projectors took the

coordinated signals from Dmitri's brain and fired them in a quantum stream to an orbiting research array, which in turn fired Dmitri's thoughts out beyond light and time. Dmitri could think an action and a linked photon on an obscure rock on the dark side of Venus would jump. The trick was in finding those parallel quantum objects, both within his head-space, which contained the seeds of the universe, and in the vast expanse of possibilities that formed time and space and matter. The next trick in his magical canon was to find a group of things and move from the subatomic level to the primeval physical realm. As far as Dmitri knew, no one apart from him had yet made that connection. No one as yet understood that all of time and all possible things could exist within a single expanded human mind-space. It was just a question of imagination, and, fundamentally, of letting that imagination run free, which seemed to Dmitri to be a problem for so many run-of-the-mill graduands and establishment-bound professors these days, Professor Lacondamine included.

With the students gone and the lab quiet, Dmitri found peace at last. He scanned his local thought-space. The lab was sealed, and Dmitri felt sublime. He was alone with his own personal drug of choice: the cradle. He thought about securing the doors, and the locking system engaged. There would be no ingress by cleaning systems, and no proverbial plugs unsocketed. Dmitri cared little for campus life now. He focused. He folded skeins of space. He tracked coordinates and systems. He followed a long-forgotten flight path, skipping over the vast ages and distances travelled by generations of pioneers in just a matter of seconds. And there she was, his darling world, his darling girl, and the creatures within her. Brennisteinn opened his mind and touched once again *Ikh Ubezhishche Pod Kholmon*.

Dmitri felt a sense of matched excitement and dread every time he hooked up with *Their Haven Under The Hill*. A day in Dmitri time could, it seemed, be years or decades in Okeanos time. The quantum relationship between his thought and far-distant sub-atomics was direct, but appeared to be subject to some aspect of relativistic time distortion that he had yet to fathom. Thought projection in local solar systems worked in pretty much real-time, but the distortion across light-years seemed to fluctuate wildly in terms of linear temporal progression. Every linking with *Their Haven Under the Hill* revealed yet another level of disintegration. It was, he felt, a little like returning after an absence to watch a favourite Tri-D soap opera and realise that it had fallen into that inevitable decay that came when the series and the actors stretched the art-form's gossamer veneer one degree too thinly.

As he folded space and touched the link points that gave him access to the orbital, Dmitri could see that the envelope within which his lovelies existed had shrunk yet again. He noted this, marking it initially as another degree of degradation, but then, as the cradle's super-massive quantum computational

arrays crunched the numbers and filled in the sub-atomic gaps to give him a thought-visual interpretation of the far-world, he realised that this was a catastrophic shift. Dmitri noted with mounting horror that the boundaries of his beloveds' existence was now measured in less than twenty metres cubed. They were down to the holo-deck and their life support power sources. The core reactor looked fatally compromised. Processing power aboard the orbital and any corresponding access to complex systems and data were hovering just above critical red lines.

Dmitri circled for a moment or two, establishing the weird strings and the filament links that hooked up nanoparticles and thoughts. Once the links solidified, it took no more than a second or two of systems interrogation, even across such vast distances, for Dmitri to link into the orbital's operational subnets and establish a more detailed mental visual. He cross-referenced data and correlated views and themes and memes based on the experiential files logged by the entity constructs. Those constructs, Valentina and Yuri, were, as yet, oblique and doubly shadowed. Dmitri set a series of standard, multi-faceted queries running over the quantum links. Orbital degradations. Gravitational wells. Power generation curves. Deterministic equations and statistical probabilities. And there, in the deep, dark confines of their personal data repositories, he found his beloved faery folk.

Dmitri shuddered involuntarily. He could feel their cold suffocation. He also experienced that exhilarating immediacy that came with the seeking, and found that his excitement was equally matched by the feelings of utter horror and recoil experienced by those who were sought. Like worms buried in a deep fissure, sensing that a predator's tongue was ragging the tunnels and the byways of a dank, fungal underworld, Dmitri could sense his loved ones shrink back from his mental touch. He knew in his heart that if he could, just once, feel mental skin on mental skin, then he might make a permanent connection before the orbital sank into oblivion. In that process there might even be salvation, but as yet, that final direct communication eluded him. Dmitri let fly the wings of his despair. In all of his searching, in each and every fold of space that he had yet ventured, he had found no answering presence, except here. All that he had ever found of life and presence and vitality beyond his own existence was a derelict relic of past human vanity.

Dmitri flexed his mental muscles again, pulling every joule, every kilowatt, every Yottawatt of power that he could from the cradle, amassing a Type One Kardashev luminosity in his mind's eye, and in doing so, Dmitri pushed his mental fingers beyond the watching space. One touch. One caress. One atom shared. He was a God and they were his creatures to save. He let his fingers feel for her presence. He dug ever deeper into the black pit of tunnels in the cryopod memory substrates. She, the primeval creature beyond the simulation, cowered

in that darkness, abject, simpering and utterly petrified. Dmitri ran his hand over what he thought might be the shape of her but he felt her shrink and scuttle and crawl away from his deep and yearning touch.

*

Three minds. A quantum state of simultaneous conjoining and separation, each mind being locked into a machine that carried thoughts on a whim of computational integrity. Aboard *Their Haven Under The Hill*, as the power curves dropped away, so the digital worlds inhabited by the avatars of the sleeping colonists, Yuri Radek and Valentina Bulganin, grew ever smaller. The cowering tunnel beasts and the dancing lovers slowly merged together as horizons dimmed, until, with a last spark, the visual spaces fell into utter darkness.

“Yuri? Yuri, can you hear me? Yuri?” Valentina curled herself up into a foetal ball, hugging her knees to her chest, feeling the weight of the galaxy bearing down on her thin, skeletal frame.

A crackle. Static. Old school. Radio waves. Local transmission. Power saving.

“Yes, kotyonok, yes I’m still here. It’s just so...” Valentina heard Yuri sob for the very first time in all of their shared centuries. “I’m so scared, Vala. Not of, you know, not that. It’s the letting go, the losing – losing you, my love.”

Valentina pictured their remaining moments in her thought-space. As the orbital systems failed, there would be a moment when the cryopods would attempt to eject, to find a place of safety out there, so that they could set up beacons and wait in vain for rescue. If the hub’s core systems were too damaged then they would fail to eject and the pods would ride with the rest of the orbital to obliteration on the first of Okeanos’s twin moons, Sykeus. Either way, she and Yuri would be separated forever.

“Yuri, my darling, before the end, one more time, my love, shall I read it?”

Silence. Not even static. Valentina read the passage from the *Book of Angel*, the passage that she had saved for her dying day. As she read out loud she thought of the watcher, and how she had so wanted to touch that hand, and yet had been so scared of the revelation that would come with that touch. Now that all was said and done, she did not feel afraid anymore. It was enough for her to know that she, that they were not alone.

“Our story, Yuri...” she began, not knowing whether he could still hear her radio transmission. “For you, Yuri, one last time...”

“The trees have inquisitive eyes, haven't they? — that is, seem as if they had. And the river says, 'Why do ye trouble me with your looks?' And you seem to

see numbers of tomorrows just all in a line, the first of them the biggest and clearest, the others getting smaller and smaller as they stand farther away; but they all seem very fierce and cruel and as if they said, 'I'm coming! Beware of me! Beware of me!' ... But you, my darling Angel, could raise up dreams with your music, and drive all such horrid fancies away!"

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Taken from the personal memoir of Professor Charles Marius Lacondamine: 'The reason for Dmitri Brennisteinn's mental collapse remained a mystery throughout the short and confused years that remained to him. We found him one morning in a completely catatonic state, slumped in the cradle of a now discontinued, experimental thought-space machine located in the basement of the School of Neuro-Astrophysics on the Yangees campus of post-Apparat Yale-Oxbridge University. Although tests showed an unusually high level of neural activity throughout Brennisteinn's remaining years, he had, sadly become locked into a state of permanent and almost totally uncommunicative psychosis, a state in which he seemed to be always looking just beyond any person or thing that might be in his physical presence. I did hear from one of the Psychology faculty Readers that Brennisteinn did occasionally quote one verse from some obscure poem. I never did look it up to see who wrote it, or, indeed, when it was written. Brennisteinn's illness caused the School to expend considerable effort in identifying lessons to be learned and to determine a new direction for our research. I think it sufficient to say, in closing this stage of the account of my academic life, that Dmitri Brennisteinn had potential. It was such a shame that we lost him at such a tender age. I have transcribed the verse that he sometimes quoted from an original note left me by a colleague from the Psychology group at Yale-Oxbridge. For Dmitri Brennisteinn. In memoriam.'

*"And the stately ships go on
To their haven under the hill;
But O for the touch of a vanished hand,
And the sound of a voice that is still!"*



Muckers

(Jack's Story)

AWAY FROM THE HOLIDAY fakery, snugly ensconced beneath the metal and the alloys and the manufactured dusts and grains that formed sandy lanes drifting down to a bogus shore line topsides, two men now walked along a conduit, heading towards the service areas underneath *Dunroamin* platform's central habitation zones. They cut a jagged joint-profile as they walked along up-lit corridors; the one, Jürgen Heidfeld, once the Commander of a Dirigisme Hunter-Killer, stiffly erect and robustly proportioned, the other, Mad Jack, once an Apparat hive-mind operative, shuffling along in a visibly grubby, pharmacological haze.

Prior to setting off on this little jaunt, and at Jack's firm insistence, they had both taken a short, sharp infusion of something loosely described as Chem-Espresso laced with a little something sobering of Mad Jack's personal concoction.

"Need a clear head now, my old mucker," had been Jack's only explanation, and Jürgen had agreed, quietly amused by the colloquialism. After their session Downtown earlier that evening, the effects of Black Label Hiroshima had been making themselves felt with prejudice, overwhelming the few nano-meds left in Jürgen's system. Jack's potion was a wonder. Jürgen felt, as he walked now in soft orange light, wrapped in a still and warm air, that he had no right to feel this alive. He should be crawling miserably under soiled bedclothes. He should be swearing off the demon liquor forever and a day. He wondered how his fellow travellers, Hamid and Jeung Zhou were making out with the platform's still standing late-night drinkers. He felt a momentary twang of pity for the scientists and engineers caught up in Hamid's Rum soaked wake.

The service lines along which Jürgen and Jack walked, their walls and ceilings covered in neatly colour-coded stripes of cable and pipe and control station, ran in a uniform grid pattern, criss-crossing on the north-south and west-east axes every two hundred metres. At Jürgen's head height, smaller crawl-ways branched off at right angles every five metres or so, running local services to whatever spaces lay overhead. As the two men walked on, covering a kilometre and a half on the inward cycle, breaking to their right every so often to head for the centre of the platform, Jack kept up a running commentary on design and function.

"Some of this shit's just a hangover from the electro-mechs. Red cables used to run high-power electrics, purple ran fibre-optics, blue pipes for fresh water, grey ones for grey-water and so on. Water still runs, but the power and data and comms is all built into the fabric. The old cables were only ever a failsafe. These days, one module connects to another and you got a network. Doesn't matter if it's a window, a brick, a sluice. Everything's connected. Not at a processing level, of course, more like an infinite wiring loom. Sensors everywhere as well. Everything's logged, if you know where to look. That's why they got the big AI arrays, and even then they got too much data to process."

Jack paused and drew breath. "Yeah. Unless your anomaly is something serious you gotta wait 'till it's systemic before anyone really takes any notice. Course, that's why..."

"It's okay, Jack," Jürgen placed a hand on Jack's shoulder. "No need for the in-depth tour."

Jack looked a little disappointed for a moment, then shrugged and continued to walk on in amiable silence. Jürgen followed on, saying, "Sorry. Didn't mean to cut you off. It's just that this stuff is pretty common. Platforms. Ships. Basics are similar. It's the differences that you need to know about. That's what's interesting, Jack. The differences."

Jack brightened as he remembered one little snippet of anecdotal information. A little flash of gossip.

"Bet you don't already know this, though. Rumour has it, down in the core, old JJ keeps the original bit of *Dunroamin* on ice. Sort of like a museum piece. An old research station. Calls it *Bliocadran* or something like that. Fuck knows why?" Jack smiled inwardly. Acorns and mighty oaks, all of which Jürgen would see very shortly.

As Jürgen and Jack walked on, Jürgen lagging behind his companion a little, an accompanying pulse of orange service lighting lit up in front of them and the corresponding light behind them switched off once they had passed. When their progress triggered the next light Jürgen stopped for a moment. Ahead of them he saw a secured bulkhead, an iris of curved, overlapping metal plates screwed

tightly shut. Jack walked on quietly and as Jürgen hurried to catch up with him, so the iris began to slide smoothly open.

“Seems to me,” said Jürgen cautiously, “someone might notice we’re opening doors? There must be a security system, some sort of protocol?”

“You’d think so,” was all that Jack said in response, before continuing towards the open bulkhead. “You’d definitely think so...”

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Beyond that initial bulkhead, the nature of the service lines changed dramatically. Jack explained the basic geography. Downtown was one of four habitable zones that ran along what was currently oriented as the western side of *Dunroamin* platform, the other three zones all being dedicated to hydroponics and organic foodstuffs. Of the remaining twelve zones in the four-by-four grid, eight were dedicated to storage facilities. There was also a manufactory, a reservoir and one currently undesignated zone, stripped bare and waiting for a new configuration to be applied. The final zone was where Jürgen and Jack were headed.

Having crossed into the inner group of four zones, they were now underneath one of the main storage facilities, and the service line here was much wider and solidly paved. Automated retrieval units ran along the metalled roads, sometimes four abreast, ferrying what looked like hoppers of refined ores into and out of the storage facility overhead. The retrieval units were short and stocky and brute metal, painted yellow and black in a traditional warning motif. Jürgen and Jack sat in the cramped manual control cabin of one such retrieval unit that Jack had hailed as soon as they had passed through the bulkhead into this zone.

Once again, Jürgen felt a little uneasy.

“As you said back there, Jack, you’d definitely think someone would be aware of us borrowing a machine like this. There should be some sort of alert, surely?”

Jack nodded and said enigmatically, “Yes, there is, but only if it triggers; only if I let it trigger.” Jack nudged a joystick to the left on a small manual control console in front of him and the retrieval unit branched to the west at the next junction, heading towards the adjacent inner zone.

“What do you mean, if it triggers? I thought you said everything was interconnected? Are you being deliberately obtuse?”

Jack held up his right hand, bidding Jürgen to silence.

“Just for a moment, please,” he whispered as the retrieval unit approached another closed bulkhead iris. “This one’s a bit trickier. Quarantine rules, you see. Well, you probably don’t, not yet.”

On the control console, a series of commands and responses flashed across a

display as if a security programme was asking for a password repeatedly without receiving a correct reply. Without warning, the display screen shifted to lifeless black. Jack seemed lost in concentration.

Ever since their apparently impromptu banding together on the beach over a shot of rum, Jürgen had felt both intrigued and disquieted by Jack, the measure of each fascination waxing and waning as they made their slow progress through the platform's service level. He felt that same icy calm now that he felt on an attack run. His senses seemed to speed up as the danger in any given situation deepened. It was, he supposed, a combination of latent ability made innate by training and long exposure to combat.

The retrieval unit slowed to a complete halt five metres in front of the still closed bulkhead iris. Jürgen felt an instinctive urge to jump down from the cab and take up a far less exposed position. He realised immediately how absurd that urge was. He was dressed in light slacks, a polo shirt and canvas beach shoes. He was unarmed. The safest place was right there in the cab with Jack. Jürgen hated that impotent sense of reliance on the unknown skills of others.

Jack broke out of his deep reverie and smiled as he turned to Jürgen and said, "All done. Shall we?"

Jack slid out of the cab and jumped down onto the roadway. As he did so the iris opened, but only sufficiently to allow one person to climb through at a time.

The air around the opening seemed to fizz and crackle as Jürgen followed Jack through the opening. Once again he felt that primeval need for weaponry. Carefully stepping through the opening, watching and listening, keeping one eye on Jack, Jürgen braced himself. As soon as he had both feet firmly on the ground in the new zone, the iris closed shut behind him and the blue fizz in the atmosphere abated. Jürgen immediately felt a change in the air. It was colder here, and distinctly damper, as though this were an uncontrolled space, a wild space. He felt his heart rate speed up.

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As Jürgen and Jack stood on a small elevation platform to the left-hand side of the service lane underneath this new habitation zone, Jürgen turned to his companion and said, "You've been quite the puzzle setter, Jack."

Jack smiled and shrugged. Above them a hatchway opened, the platform rose slowly, and they emerged from the service lane, their heads in bright, fresh air. Jürgen spun around slowly and took in the view. He felt utterly and wonderfully dumbfounded by the sights and the smells surrounding him. He was standing at the edge of a small, two-thousand metre by two-thousand metre square of bucolic Gaian serendipity. He and Jack stepped from the elevation platform onto solid, earthy ground that formed part of a small rise at the edge of the zone,

almost immediately above their original point of entry. Before them rolled a sea of grass studded with copses of deciduous woodland. The land sloped gently down towards the centre of the zone, where a stream meandered through a haze of flies and bees. Overhead, crows appeared to wheel and spin, noisily mobbing what looked like a buzzard. Martins and swallows mopped up airborne insects against a bright blue sky. In the meadows spreading out below them Jürgen could make out the palsied hop of white tailed rabbits and the slow grazing of untroubled roe deer and... He stepped back and caught his breath. Over to the right, at the foot of the sloping fields in front of him, he could see a horse tethered to a gate, a gate that bordered a garden, in the middle of which he saw a log cabin. He noted, and felt faint as he did so, that the little, grey, pot-bellied chimney atop the cottage belched a stain of smoke, grey upon the face of a lowering artificial sun.

Jürgen sank to his knees. It was too much to take in. Out here, at the edge of the Belt, smothered by the void, brittle with the endless chill of deep space, he felt embraced by life when he should, by rights, be floating across the way-out-there, desiccated and hollowed out from battle and the vacuum. He sobbed involuntarily, and immediately began to fight back this unbidden emotional expression. He was a K-Ship Commander.

He felt Jack place a hand on his shoulder.

“A good time to drink, my friend.” Jack handed Jürgen his bottle of something mixed in a brown paper bag. Jürgen took one long, grateful, swig and handed the bag and bottle back to Jack. He felt warmth flood through his veins. He felt light-headed. Stars swam in front of his eyes for a moment, but then the disorientation passed. He heard insect buzz. He watched long grass waves flow and then, some moments later, he felt an impossible breeze waft across his face. Jürgen grinned broadly.

*

Not another word passed between the two men as they walked slowly across the sloping fields towards the cabin. Jürgen looked at this wonderfully fake world through raptures. When they reached the gated fence, and with Jack's nodded permission, Jürgen stroked the horse's nose and felt another small moment of wonder unfold as his hand absorbed equine oils and scents. At the cabin door, Jack fished a key from one his overcoat's inner pockets. He bade Jürgen sit on the porch and ten minutes later he emerged with another bottle of Hiroshima and two enamel mugs of piping hot coffee. They sat, in silence still, until the coffee was drained down to the dregs and they were each on a second chaser.

Jack pointed with his cigarette at the hazing shade of purple rising above the slope down which they had wandered earlier.

“Sun's setting behind the cabin. Good time for story-telling.”

Jürgen looked at his companion. Jack was clearly far more accomplished an artist than he had given the man credit for. The grotesques in the gallery in Downtown were pot-boilers. This journey was, he thought, a masterpiece. It was all a set-up, he knew that, but in this moment Jürgen loved Jack for it. To smell sunshine on a summer meadow out here. He smiled and grunted his agreement. Time for Jack to talk.

Jack refreshed both tumblers and settled back into his rocking chair.

“This place...” Jack waved his glass at the fields and darkening copses. “Jochim’s private space. Calls it *Wilderness*. Some of it’s real. Grasses and trees and the insects, necessary. Birds are borgs, of course. Horse and deer too. That’s why the horse waits so patiently tethered to that gate. But then, what do you expect after three hundred years out here? Still, pretty amazing, if you think about it.

“Whole place is off-grid. Mostly. Got a console inside and there’s another one over there, behind that large coppice on the far slope. Originally a place for Jochim and Helene to bunk down, away from prying eyes. Still do from time to time. Jochim knows I got a key so we’re not trespassing, exactly.”

Jack paused to take a drink and Jürgen let the preamble wash over him, enjoying the evening drone from all of Jochim’s creatures, regardless of origin.

“Thing is,” continued Jack, “the place is shielded. Space to think. Ever since they took my machines away, my implants...” Jack let his right hand wander over the scars at his temple, “I found I need clear space, at least that’s what... Anyway, it’s a useful conceit, being off-grid, I mean. Jochim’s little luxury extended to his pet Icehead. Unless you’re me, people only ever come out here if they’re very specifically invited, which is rarely, and heavily managed, as you might imagine.

“And there’s a reason for that. Second console I mentioned? Behind those trees there’s another building. Looks like an old barn on the outside. Keeping up appearances. But if you get close...” Jack nodded conspiratorially. “Which we will... You’ll find out why we’re here.”

Jürgen edged forward in his chair. This was the moment. This was the difference. He felt both wary and privileged, conscious that the whole thing must be designed to elicit his support in some way, and yet he was still keen for the reveal.

Jack noticed that slight movement and he too edged forward, mirroring his companion to reinforce the bond that he felt growing between them.

“Shall we?” he asked, once again.

*

Jack and Jürgen pulled open what, at first glance, looked like a rotted-out barn door, revealing an alloy wall with a pressure door set neatly in the middle.

“Not exactly hidden...” said Jürgen phlegmatically.

“No need, really. As I said, only those in the know ever come out here with any regularity. This bit is closed off any other time.”

Jack punched a code into an archaic button control panel beside the door and so it opened, sliding to one side softly. The two men entered a narrow corridor in single file. All told, the corridor stretched for no more than fifty metres and ended in a blanked off alloy wall.

“I’ve got to assume we triggered some sort of alarm this time,” said Jürgen as he looked at the walls to each side of the corridor. “Looks complicated, whatever it is.”

Jack turned to Jürgen and spoke quietly. “Oh yes. This time we’ve lit up Med Two’s synapses like a supernova. Jochim will be quite pleased, I imagine.”

Another one of Jack’s loaded one-liners, Jürgen thought. He ignored the comment for the time being and ran his hand across the wall. From floor to ceiling, some twenty metres above their heads, the wall was divided into tiny rectangles, no more than two centimetres square. Within each square was a cylindrical cap with a single illuminated button in the middle. Jürgen wanted to press the buttons but resisted the temptation. He looked directly at Jack instead and waited.

“Cold storage, Jürgen. This corridor alone there’s two-hundred thousand units. Two more identical corridors either side of this one, more below in the service level. That’s over a million little buttons, each one of them storing a clone... well, the cellular bits and pieces and the genetic instructions to make one. Sort of mechanical, ready-fertilised egg. That’s about three-hundred copies of every man and woman on the station, give or take a little narcissistic numerical dominance by Jochim and Helene’s future selves. Cryogenics. The heart of the matter.”

Jürgen instinctively took a step back from the wall in front of him and immediately felt his back nestle against the opposite wall, a wall full of gently depressing buttons. He shot an alarmed look at Jack who smiled sweetly before he too firmly hit every button within reach.

“No key. Everything’s locked down safely. No need to worry.” Jack took one last look along the corridor walls. “Gives me the creeps. Let’s head back to the cabin.”

*

“Thing is,” Jack paused, waiting for a simulated cloud to pass across a full moon

so that he could negotiate a stile in the last field before they got back to the cabin veranda and the bottle of Hiroshima, “thing is, I’ve known Jochim for two-hundred years nearly. He’s already told you we’re leaving, hasn’t he?”

Jürgen responded in the affirmative as he too jumped the stile.

“Course he has,” continued Jack as he strolled homewards. “I suppose you thought it was just the three-thousand bugging souls aboard this old tub, though? A plucky band of brothers and sisters. Iceheads winning and all that? True enough. Not that hive minds are where it’s really at. Nothing so tedious. That’s just propaganda. Not as though Jochim and the gang can’t do the same, anyway. Sorry, going off on one.”

They reached the gate and the final stroll towards rum and cigarettes.

“After you.”

The two men resumed their seats, refreshed their glasses, and this time Jürgen did accept the offered cigarette. He assumed that anything carcinogenic done with Jack could be undone by Helene.

Jack settled back and began his story-telling.

“Seeding, you see. Three thousand ain’t enough, not to be sure. Not enough to be able to fight back if things go badly. Jochim will have mentioned the six tugs and the speed of light stuff. Key thing there is those tugs. Each one of them is self-sufficient. Park it in front of a suitable rock and over a century or so, with a little support from the main platform, it’ll produce everything you need to get started. Terra-forming, manufacturing, you name it.

“But four hundred souls left behind out of our three-thousand – four hundred would fail. Go stir crazy. Hit the wall. Statistics prove it. Second, third generations? Increasing crises. You need bigger numbers to have a chance. So each seeded settlement gets one hundred and fifty thousand eggs – enough to keep the thing going once they flood their new world with weirdly similar faces. Original Jochim and Helene and the rest of the old-time pioneers then wander off on this platform once the six seeded worlds are up and running. More statistics. Models suggest one of the settlements should survive and prosper. That’s the plan.”

Jürgen closed his eyes. It had been a long day and he needed to sleep again. He was still not fit and his most recent chemical abuse was taking its inevitable toll. Jack’s stories made his head spin and he was too tired to assimilate the enormity of the message.

“Jochim just needs a head start,” continued Jack, with matter-of-fact purpose, topping up his glass one last time. “Safe passage while we accelerate away. You know those tugs combined can hit point nine-eight of light. Point nine-eight...”

Jürgen suddenly felt very awake. He sat bolt upright, coughing loudly as he swallowed smoke that still lingered above his head.

“You can’t, you can’t be serious! We only make three per cent, maybe three point five on a fast attack. Seriously? Scheiße, fucking scheiße!”

Jack took a last long drag on his own cigarette.

“Yep, ninety-eight per cent. If we can keep accelerating through Icehead space without interruption. Should be hitting plus ninety by the time we hit Termination Shock and break the Heliopause.”

Jürgen sat in silence, thoughts flashing through his head. What sort of field tech? Computers? Far-scan? How? Shields? Dust? Time? Oort debris?

To cap the evening off Jack stood up and poured himself one last little top-up before placing the bottle back down on the table next to Jürgen’s glass.

“Time to hit the sack. We’ll wander back tomorrow some time. One last thing to freak you, though. Jochim and Helene and the rest. Version two point zero, every one of them. Nothing original. Mixed clone and augment. Great tech but original skin wears out eventually. Minds live on pretty well. Seems to me that simple fact has turned them all a wee bit messianic. That’s why they still need a little of that original human touch to...”

Jürgen jumped up and grabbed Jack by the wrist. He breathed hard as he stared at the older man. Jochim and Helene’s artificiality did not really bother him that much. He had already guessed at some of it. He had just realised what the difference was. It was Jack. Jürgen suddenly felt betrayed by the one man he had started to trust.

“And you?” he asked aggressively. “The way you don’t bother. The way you don’t care about alerts and security and alarms? Are you a machine?”

Jack stood toe to toe with Jürgen for a moment, returning Jürgen’s stare directly. Then he relaxed and shook his wrist free from Jürgen’s grip.

“No, mate. Version one of me.” Jack paused. He stepped away from Jürgen slowly, saying, “You’re right in one way, though. I am different. Apparat. First generation organic. These scars? My lost machines? Never fucking needed them, mate. I *am* the ghost in the machine.”

With that Jack shuffled into the cabin, wrapped in his shabby overcoat, for all the worlds looking like a vagrant searching out a less disappointing begging ground, leaving Jürgen to reach for a conveniently abandoned old-tech gas lighter and a packet of rough cut cigarettes.



Second Skin

(Miloš's Story)

TO SLIDE? NOT TO slide? On all fours, head down, eyes closed to keep the flashing lights at bay. He held himself rigid on a polished parquet floor, his claws digging in to stop his paws slipping out from underneath his body. Stick thin. Clearly defined ribs. All elbows and points and scabs. A neglected hound. He had lost all sense of time, here in the deeps. He was hollowed out. He used the hunger as way of holding on to something that he remembered vaguely as a reality.

The sound of breaking glass, away to his left in a room just two doors down from his own. Miloš the dog, alone, listening to the glass break and the winds of the void sucking at his bones. The sound of glass and wind and faint peals of laughter beyond the door were a repeating theme, one of a number of cycles of hallucination that he had to endure. These were the bouts of madness that dog Miloš had to live through in order to surface momentarily in the real. He was trained. Once upon a time he had been conditioned for this, back in the kennels... No, he thought, that was wrong, but he could neither make shape nor sense of his memories. It was enough that he remained a good dog.

“Good boy.”

He barked twice, hearing words in his head. “Good boy!”

He licked his lips and wondered whether the laughing demons beyond the door would put a bowl of cool water out for him this time. He had long since given up on solids. He felt like howling. He felt a paw slip to the side. He belly-growled and dug his claws even harder into the wooden floor, determined not to slip any

further this time. He felt that dread shift in the world. A faint shimmer as the rules of the construct twisted in his head. The floor turned to glass. He howled now, long and hard and desperate. His legs slowly splayed apart and his body sank towards waiting mouths full of row upon row of sharply serrated teeth, mouths hanging in the darkness just below the cracking glass.

*

A beacon. A signature written in digital cuneiform. Crude symbols and broken dialects. Hand-paintings on a galactic cave wall. The signals were leading him substantially off the beaten track, in every sense of the phrase, but that was good. These signals, these faint echoes in the darkness, suggested that as yet the artefact was unpicked. There might still be flesh on the bone. Out here, where star-weeds tumbled on solar winds, this unknown relic was definitely something of interest to a wandering and financially speculative astro-archeologist.

Wardour Praed could stand a minor detour about now. The last couple of folds had proven substantially barren, and he needed a diversion, no matter how improbable the outcome. Months of isolation wore a man down. Having a purpose, having a target vector, helped to keep the weirdings at bay. Praed could invoke a host of creatures to keep him company out in the wilds, but he chose not to use artificials. He liked the silence because it gave him time to think fantastic thoughts, but every so often, a diversion was called for, and this particular artefact, at a couple of light years distance was nothing more than an hour or two of divergence from an essentially random flight plan in his ageing but favourite Foldship. The Mothership, the *RV Howard Carter*, was berthed at a convenient hold point in the greater fold. Praed had all the time in the galaxy to do something irrational.

He double-checked the navigational computations and projected a positive thought to his embedded neural interface. The ship seemed to hunker down slightly, and his gel suit applied a gentle pressure around his seated body. The ship entered what he liked to think of as deep contemplation. The navigation system started to fold space as if it were a kirigami master folding a piece of paper into thin strips and cutting a hole near each of the left hand creases, so that he and the ship traversed vast distances in a series of short and simple steps. It would take a couple of hours to complete the journey. When the ship unfolded this particular piece of super-strange galactic paper he would be light years distant, sitting in perfect peace and harmony at the paper's far edge, right next to the beacon source.

As he waited, cocooned in the spherical bubble at the rear of his ship's long and thin folding needle, Praed ran through the numbers and the deep-scan analysis one more time. Having an accurate, albeit embellished, data stream would be an essential prerequisite for publication on the academic casts. The evidence

amassed so far was vague but tantalising. The initial broadcast data could have been dismissed as cosmic microwave background interference, but one of the learned search algorithms on board the *RV Howard Carter* had recognised a long dormant cue-form. An ancient communications protocol. Once the machines had recognised the command protocols, working out basic coordinates and idents was straightforward. Data analysis completed during Praed's subsequent folds suggested a ranged likelihood that the artefact was between three and five thousand years old. Not the oldest off-world human relic, but as an apparently live and extant entity, it was tantalising.

Praed allowed his thoughts to wander forward. He drifted beyond speculation and saw a somewhat idealised version of his current self, standing mid-centre in a Tri-D lecture. He would hold the audience in the palm of his hand. He would walk them through the discovery of a rocket ship, or perhaps an ion drive machine, or, best of all, given the likely date range, one of the earliest, tokamak derived, fusion ships. Praed stopped in mid imaginary sentence, milking the anticipation of his galactic audience. He squared up and offered his best profile. He would be magnificent, the youngest and most acclaimed Professor of astro-archeology this side of the galactic core. He grinned.

The countdown clock in his head ticked away slowly and evenly, even though his mental perception of speed and distance was ablaze. Praed let slip the fantasy and zeroed in on the beacon signal. With each fold, with each leap towards his target, he paused the ship for a second or two, acquired the signal again, and focussed a little more sharply on the data stream. There would be twelve folds and two edges to navigate. With each fold completed, his on-board machines would learn more. He would become aware, just as they did. Fold five revealed a definite pattern. The data signature was fundamentally and primitively digital. That put the source out there towards the five thousand standard year mark. Exciting stuff.

By fold nine, Praed was confused. The overt digital signal was a false marker. His own tech had failed to spot a sub-carrier wrapped up within the bogus outer envelope. The signal was using a quantum light carrier to generate a cloaking field. A basic form of encryption largely forgotten now. It was old and crude, but nonetheless effective and disappointing for that. Praed now estimated the beacon to herald from somewhere in the mid date range. Around three and a half thousand standard years. Almost certainly a later model fusion drive. Praed felt robbed by stealth technology that was so basic and yet impressively stubborn. He sighed audibly as his soaring imagination crashed back down towards the ground. He was almost certainly on a wild goose chase. The artefact was probably junk. Jettisoned detritus, marked simply as a courtesy to other ships.

By fold eleven, Praed had a name. *Ellengowan*. The old girl was off grid. Praed could feel his sense of anticipation deepen again. He slipped back easily into a

tense and expectant frame of mind. An unknown ship. Unregistered. Lost to the data mines and the registers and the archived manifests. He trawled the standard texts and found an obscure link. Back end of the first expansion. Companies and missions and religious miscreants setting out on their fragile wings buoyed by their misguided prayers. He might, he thought, just might pull it off. He continued to search the archives, but in vain, for any reference to a starship by the name of *Ellengowan*. Praed did, however, find one vague mention of a prehistoric Earth vessel that sailed a planetary sea. He speculated wildly. A lost starship from the missionary era. That would be too much. A fantasy story for children. The sort of fantastic story that he had loved from his own nursery days – and a healthy payday to boot.

*

Incoming data. A security protocol. Embedded telemetry. The probing of the beacon signal by Praed's interrogation devices triggered a fluctuation in the sticky quantum flow. A photon, held in secure containment aboard the target artefact, twitched when its endlessly repeating clone was read by the incoming archeological survey Foldship's intelligent machines. The data casket, long ago dropped by the exploring *Ellengowan*, attempted to contact its protected message vector, Miloš Forty-three.

Miloš. Dog and man. The form varied depending on the level of psychosis. Once again he found himself on all fours. The fundamental question remained the same. To slide? Not to slide? He squatted with his head down, his eyes closed to keep the flashing lights at bay. He held himself rigid on a polished parquet floor, his fingers and toes splayed and held rigid to stop his hands and feet from slipping out from underneath his body. Miloš was stick thin, showing clearly defined ribs above a distended belly. He was all elbows and knees and points and scabs. A neglected and malnourished waif. He had lost all sense of time, here in the deeps. He was hollowed out. He used the hunger as way of holding on to reality.

The sound of breaking glass, away to his left in a room just two doors down from his own. Miloš, the man, was alone. He listened again to glass breaking and the winds of the void sucking at his bones. The sound of glass and wind and faint peals of laughter beyond the door were a repeating theme, one of a number of cycles of hallucination that he had to endure. These were the bouts of madness that man Miloš had to live through in order to surface momentarily in the real. He was trained. Once upon a time he had been conditioned for this, back in Holy Orders... No, he thought, that was wrong, but he could neither make shape nor sense of his memories. It was enough that he remained a faithful man.

“Good boy.” He said it out loud twice, hearing the words echo off the walls of

his penitential cell. “Good boy!”

The voices on the wind were faintly odd this time, though. He tilted his shaggy head to hear better. The demon laughter seemed different and more compelling than in his usual hallucinations. More urgent. There was a definite sound now. A shape was forming in his head. He held his breath. He dare not open his eyes or look up. The lights would blind him. He felt a deep sense of dread. The voices were almost clear. He heard changes and clicks and softer roundings. The image forming in his head became ever-sharper. A ship. A great sailing ship, four-masted and fully-rigged. She was there for a moment, a shape looming in the fog, and then she was gone. Miloš's sense of dread deepened. Was it the black ship that came in the night darks to take bad creatures away? He felt the construct twitch yet again. His self-image flipped. He cowered down, wrapping his tail between his legs and putting his ears back in abject submission. Bad dog!

The worlds in his head misted and fell away. He licked his lips and wondered whether the laughing demons beyond the door would put a bowl of cool water out for him this time. He had long since given up on solids. He felt like screaming. The night ships were out there. Bad man! Bad dog! He looked down and saw human limbs extending beneath his furred body. He felt a hand slip to the side. He growled out his defiance and pressed his fingers even harder into the wooden floor, determined not to slip any further this time. He felt again that dread shift in the world, but this time the shift was piratical and utterly insane. The floor turned to ice. He howled now, long and hard and desperate. His knees and hands slowly splayed apart and his distended and empty belly sank towards waiting mouths full of row upon row of sharply serrated teeth, mouths hanging in the darkness just below the cracking ice.

*

A final series of checks. Simple thrust manoeuvres. Edging closer. Defensive deep-scans running across local space. Tempting little decoys were a stock in trade of renegades, robbers and privateers. Praed wanted to get out of this with his prize intact. His machines were slowly establishing communications protocols with the as yet unclassified object's on-board systems, primitives showing significant functional degradation and decay. Creating a meaningful dialogue across millennia would take some time, and Praed was once again beginning to wonder whether even the meagre effort of folding his way across two light-years of unmapped void was going to offer up anything other than three thousand year old refuse.

The object was in visual range now. A dull, pock-marked oblong box, its surface ragged and scoured by radiation and dust and the extreme malaise affected by almost eternal stagnation. A remnant energy field flickered ineffectually at random points around the object's shell. The one saving grace in the data stream

was a snatched and broken decode. Analysis showed that the object appeared to hold a data cache but the vector was obscure. Predictives suggested that the object's systems did not, themselves, appear to be the data cache. Praed's mood swung back towards the positive. He drew a simple conclusion. Whatever the outer shell might be, it appeared that this scruffy old box of tricks had been designed to hold something worth protecting through millennia of decay and slow destruction.

Praed pushed the Foldship to within two thousand metres of the object and then spun the needle out and to the rear so that his command bubble faced directly onto the found artefact. Using minimal invasive thrust, Praed edged closer, opening up the bubble's observation panel so that he could see the thing with his own eyes as well as on visual and tactical displays. It was such a small and insignificant thing. The object reminded him of an ancient sarcophagus that he had once seen in a childhood visit to an old-world museum. The weathered surface of the box looked just like pitted and cracked stone. Now that Praed thought about it, he was impressed that such a primitive machine could survive out here for so long and still retain some residual function.

At five hundred metres, Praed cut the last residual thrust and allowed the Foldship to coast in towards the artefact with a glacial velocity. He maintained a constant set of scans, wary of defensive threats as well as of his own vessel's bow wave potential to damage such a fragile thing. His command seat was at the forward edge of the spherical bubble, with the whole unit being just large enough to accommodate a man and the machines required to keep him alive and to run the Foldship. Behind the bubble, mimicking a stubby thorax, was an open storage bay. A simple field generator had already been deployed so that Praed could pull the object into that storage bay using light-touch energy traction. Quarantine drones hovered around the casket, providing constant updates and telemetry. Praed's on-board machines were delving ever deeper into the casket's substrates and intelligences.

Praed's eyelids fluttered as he monitored a host of outputs and analytics. That's odd, he thought, as another layer of security features in the artefact's core command set finally yielded to an adapted challenge. Praed pulled the resulting analysis into a three dimensional holograph and spun the shapes and the streams around as he tried to make sense of the data. Familiar shapes swirled into half-formed patterns before breaking apart again in cascades of data and code snippets.

He swallowed hard, mouthing, "Oh my... Oh my..."

Praed was momentarily lost for words. He felt his skin prickle and tingle. His heart skipped in his chest. He kept repeating those two words.

"Oh my... Oh my..."

Taking shape in the data stream, becoming flesh and blood before his wide, blue eyes, Praed saw the unmistakable shape of a man forming. More than that. The data sets on screen and in the holographic display matched. Praed opened his mind to the machines and let the cascade flood into his head. There was no mistaking this. The simulation running in his head clearly showed that the man was both a functional being and had no significant augmentation. The creature was still basically an ape.

Praed almost swooned in his seat. He felt faint. He could barely speak. He felt a hard lump settle in his throat.

“Oh my...” he said out loud one final time.

Praed had hit the jackpot.

*

The casket was designed to respond to specific protocols based on neo-Careyist signatures and motifs. The constant click-over of fusion clocks meant nothing to the waiting intelligence. The casket had a simple mission: deliver the data to a sympathetic host. The fact that the *Ellengowan* and her mothership, the *Southern Cross*, had long ago faded out of human memory, was systemically immaterial. The clocks ticked on. The casket waited.

The casket tried to make sense of this new situation. The data vector was in a deeply psychotic state, made all the worse by the unexpected and unusually long wait for data collection. The data vector's general mental situation was then exacerbated by the resulting rationing of essential supplies. The casket had ceased to provide any but the most essential psychotropic treatments over a thousand years previously. The hosted human form remained locked in stasis, in deep freeze, and would likely never thaw, at least in any meaningful aspect. The mind, the uploaded sense of Miloš Forty-three, remained viable however, and through that vector the casket would deliver knowledge of a Godless galaxy to the Mission. Miloš must, therefore, be protected, but the invasive, this unknown interrogator was using techniques sublimely beyond the casket's defensive computational capabilities. A next step was required. The machine faced an unfavourable final option.

As the casket intelligence and its fading sub-systems battled with the intruder, they found out quickly that they suffered with one huge handicap. Making sense of the situation required a fully-functioning machine intelligence, capable of working in lock-step with some reasonably sane human input. The machine, while still patchily functional, suffered with deep memory loss. The hosted human body was essentially inert. The human mind, although active, was far beyond the rational. Nevertheless, Miloš, whatever state he might be in, could be called back from his long sojourn in purgatory. The machine intelligence considered this for a moment before making an alternative and definite decision.

The uploaded and psychotic mind of Miloš Forty-three would compromise an already catastrophic situation. Instead, the casket intelligence responded like a punch-drunk boxer as it attempted to parry another wave of invasive dissembler code. It failed and fell back upon its last quantum redoubt, held up only by metaphorical ringside ropes. Another layer of security was peeled away. Options were limited. A prime directive. Destroy the data if all else was lost. Swarming flights of alien code bugs were inside the machine's inner core. The casket machine mind tried to invoke a fatal fission reaction.

Too late.

That final self-destructive command broke upon a virtual fist formed by the invading code swarm.

*

To slide was no longer an option. Miloš floated in the void, looking up at the broken ice floes, staring out into the flashing lights as the ravening mouths below him ripped ineffectually at a fading image of his bare back. All flesh and fur and viscera had been stripped from him now. His bones had been gnawed to the marrow and the last flakes of his physical being drifted down towards the floor of the universe. He felt no pain. He felt no pressure or weight. The hunger pangs were a distant memory. Miloš wondered why he had struggled on for so long. This descent into final madness was an unexpectedly warm and welcome relief.

It occurred to Miloš as he drifted downwards that this sense of warmth, this sense of unity and peace, was almost rational. He had a feeling of limitless time, during which he had fought claw and nail to escape the hungering, and now, when he should finally have been consumed, he felt as though he were being released. The chains that had bound him for so long were loosening. He felt light-headed. Miloš twisted in the void, dropping through a wall of fading teeth, settling slowly onto a hard metal floor

He was on all fours again, with his head down and with his eyes closed to keep at bay those bright lights in this strange space. He held himself rigid on a metal grating, his claws digging into the grooves. There was no danger of his paws slipping out from underneath his body. Miloš looked at his re-emergent physical form. He remained stick thin. Clearly defined ribs. All elbows and points and scabs. He was truly a neglected hound. Unlike those long, dark days in that long ago world of timeless pain, he now felt a distinct sense of place and space and progression, here in the shallows. He no longer felt hollowed out. He sensed things viscerally. He was, he supposed, somewhere close to the real.

The sound of breaking glass, away to his left in a room just two doors down from this strange space. How, he wondered, did he know that? He was Miloš the dog, alone, listening to the glass break and the winds of the void sucking at his

bones. The sound of glass and wind and faint peals of laughter beyond the door were a repeating theme, a cycle of hallucination that he remembered. He recalled ancient bouts of madness that dog Miloš had lived through, but now, at last, he had surfaced in the near-real. He was trained. Once upon a time he had been conditioned for this, back in the kennels... No, he thought, that was wrong, but he could still neither make shape nor sense of his memories. It was enough that he remained a good dog.

“Good boy.” He barked twice, hearing words in his head. “Good boy!”

He licked his lips and wondered whether the laughing demons beyond the door would pat him and nuzzle him and join in with the new pack bonding. He felt like howling.

His ears flicked backwards as he heard a door slide open in a wall behind him. He stood rigidly, gripping the grating ever harder. He belly-growled, determined to let the demon in the light know that, as famished and weak as he appeared, this dog was still vital. He felt that dread shift in the world. Miloš felt and saw a faint shimmer as the rules of the construct twisted in his head. The floor turned to flowing water. He howled now, long and hard and desperate.

A vaguely familiar voice spoke to him.

“Over to you, now, Miloš...”

The flowing currents strengthened and his legs were swept away from underneath his body. The undertow dragged him down. He fought for clear air, but the waters pulled and tugged him under. He opened his mouth to howl one last time, and knew for sure, as the waters filled his mouth and nostrils and lungs, that he was a dead dog. The last thing he saw as he sank towards the riverbed was a wall of disembodied fish mouths full of row upon row of sharply serrated teeth, mouths swarming towards him in the shadowed floodwater depths.

*

Praed had slept a little during the return hop to the *RV Howard Carter*. His true physical need for rest was limited, plugged up as he was with ship systems and nutrient feeds and stimulants. He found, however, that a moment or two of deeper meditation helped him to clear away the competing confusions inherent in manipulating multi-threaded data streams. He wanted to focus on a single challenge. He wanted to concentrate on the enigma that was, he now knew, called Miloš Forty-three

The ship’s folding needle slid into a perfectly fitted sheath within the body of the main vessel, so that only the command bubble remained exposed to the outer void. The bubble nestled in the centre of a flat forward facing disk, behind which an array of pods and cylinders and randomly shaped habitats were tethered to a

central spine. At imprecise intervals folding needles protruded from that spine like the spines of a sea urchin, pointing in all directions except on the forward plane. Within the body of the vessel, in preparation for transfer to the main archeolab, the data casket was already being transferred to a mag-loop that ran along the ship's central spine. Praed monitored progress while he slowly and methodically unhooked himself from the umbilicals and the feed lines and data connectors that had bound him in his Foldship-world these last few hours. Aboard the *RV Howard Carter* he had a little more space to roam. He cleaned up a couple of the wet interface points on his forearms and chest. Then, naked as the day he was born, he ambled into the main body of the ship on bare and hairless feet.

He dressed in a simple wraparound robe, all the while tracking the casket as it moved deliberately along the ship's spine and into the main lab. He watched as his machines analysed and then fabricated interfaces that would connect him directly to the ancients. The interfaces would take another couple of hours to complete and then hook into the casket's remaining operational constructs. For now, the casket lay inert and dull, presenting a minimal operational signature to scans and probes. All bar the core life support systems had already been stripped bare. There remained the creature's physical body, held in cryo-stasis, and now enhanced with Praed's own medical devices. There also remained a stubborn knot of data stores that had, so far, resisted decryption. Analysis indicated an active but closed substrate. He was certain now that this was where the treasure was buried.

While systems and programmes and probes did their work, Praed pored over the results of his earlier investigations. The casket and its cargo were early human in origin. Internal casket records identified the cargo as Miloš Forty-three, a clone data vector, carried by a missionary ship, the *Ellengowan*, launched around the middle of old Earth's thirty-fifth century. By standard reckoning that made the artefact just short of four thousand years old. Operational records indicated a deployment at least a millennia after that launch date. The casket itself was a basic but robust cryo-system designed to maintain a human body as a source of data. The closed circuitry at the heart of the machine was, Praed guessed, a mind construct, similar in function to his own neural networks, but massively more primitive.

Praed reviewed key status data. Even with his own advanced meds and machines in place, the physical body would be unlikely to survive an awakening. From a presentational point of view, the ape within would never amount to much more than a curiosity. Useful for advertising, but a freak show exhibit at best. Praed would ensure that the basic casket and cadaver combination remained viable, at the very least as a part of his private collection, but they alone would not make the impact that he had hoped for. As for the casket's more advanced operational

coding, that would offer a small insight into primitive systems and logic, but their patched and decayed nature would once again be unlikely to offer any deep research opportunities. No, thought Praed, no. The true value lay in the contained mind, a mind that, so far, had eluded all of his machine-lead interventions.

The intelligence aboard the *RV Howard Carter* was significantly greater in range and capability than that aboard the small Foldship that Praed had used to go out and fetch the casket. Praed thought through a series of options, guiding the machines as he sipped orange juice, and waited for the next phase response to his suggestions. So guided, the machines skipped through trillions of combinations and adaptations every second, probing for weaknesses or doorways.

Time and expectation. No matter the distance and the relativistic switchbacks, no matter the breadth and scale of Praed's experience travelling across the heavens, he remained as prone as the next impecunious wanderer, to impatience. He preferred to let the machines do the talking, but so far, the only glimmer of hope lay in a direct, mind-to-mind interface. The casket's core data construct remained stubbornly closed to machine intelligence, but did offer a single pathway for an upload. Praed felt that he had few options. He wanted to know what was in the box. He wanted to know, once and for all, whether his little jaunt would lead to a magical moment of true serendipity.

He paced his quarters for a few minutes longer, mulling over this one option. The construct was primitive and the tunnel into it was narrow and restricted. He would have to take precautions, both in shoring up the tunnel walls and in limiting his exposure to the mind within. There could be no telling what state such a primitive mind might be in. Praed flash-read studies of extreme isolation. Catatonia seemed the best bet. He should, he decided, also arm himself against the saddest of all outcomes: his own disappointment.

*

Praed lay on a medical station platform, once again tubed and wired and logged into the machine world. He liked to imagine himself as a dragonfly in these situations. He hovered above a pond, dark and deep, watching for signs of prey. He felt the breeze on his wingtips, and he flicked this way and that, orienting himself, bearing down on the slowly spinning whirlpool at the heart of the pond. This would be his visualised point of entry into the alien landscapes of the data casket. He buzzed across the water's surface, sensing the tension and the cold, looking for signs of the body and the mind that lay deep and dark upon the sediments at the bottom of the world. In his mind's eye he checked and checked again that his avatar was ship-shape. He was a moment away from the final flicker and switch. He would step out of the natural world and let his mind fall

into the whirlpool. He would be wrapped in neural gossamer, running security programmes and defensive firewalls. He would sit at the centre of his digital cocoon just as if he was once again skipping across vast skies in his Foldship.

His sense of his own shape morphed and he became a bullet, spinning into the whirlpool with sudden and explosive mass and velocity.

Injection into the casket construct was almost instantaneous. There was a microsecond of blackout, but Praed was confident. Data and analysis showed all systems in the green. He opened his machine eyes and started to assemble data and cues and parameters. He deployed perimeter defences and then armed himself with body-formed shielding fields. He was dressed in black, sporting the virtual equivalence of a traditional katana strapped across his back. Praed's machine entity recorded every aspect of his incursion into the casket's data layers. He wanted to look the part when he published his academic paper. Praed smiled to himself as he slowly spun around, taking in the scenery. He had a working title in his head: *The Tomb of the Ellengowan Ape*, a play on the original Howard Carter's account of discovery in the Valley of the Kings.

Praed turned full-circle and faced into the empty construct space, with the tunnel, his entry point, being squarely at his back. He took a single pace forward, carefully checking that his perimeter defences and his personal shields remained in lock-step. He had to pace himself. Deep in the heart of an alien machine there might be a lag between his pre-thought, his own movement, and the corresponding alignment of his defensive protocols. At this stage, alone as he appeared to be, he remained highly cautious. All seemed to be well. The comms and data links back to the outside world were effective. His prone physical body was in a relaxed and dormant state. His avatar was, quite clearly, the most advanced piece of kit in this virtual world, used to bearing only the mind of one primitive ape.

Praed set his own mind to the question of communication. He had loaded a translation protocol before his injection, and based on the programmed command sets used by the casket, he thought that he had a more than even chance of making himself understood should he make a new acquaintance. Happy with those options, Praed tried a short run. His secure fields maintained perfect alignment. He adjusted his visuals, lightening the inputs so that he could make more sense in the darkness.

There appeared to be no structure. The space within the construct appeared to be a contained void. Dark and deep and blank save for the sensation of the unseen floor upon which he walked. Praed's heart sank a little. He continued to walk forward, mapping the space, until he felt that he was somewhere near the centre. That was when his sense of solitude slipped. Praed felt the hairs on his virtual skin stand upright. He started to think about sweat. His mechanistic heart

skipped a beat. Something was circling around the outer perimeter wall, heading down and behind him towards the tunnel entrance.

Praed brought a full scan and diagnostic sweep to bear on the skulking creature by the far wall. He had to wait a second longer than he thought necessary. The delay felt like a repeat of the injection blackout. He shook his head, as if he might reconnect a loose pathway, but all the scans revealed was a slightly darker patch in the void. Praed upped the sensitivity of his virtual probes. Maybe, he thought, these apes had been a little more capable than he had given them credit for. He sought and retrieved an enhanced visual mapper, loading it into his virtual brain with the flicker of an eyelid. He looked again at the far wall. The creature had come to a stop beside the tunnel entrance. Praed watched, dumbfounded, as the tunnel entrance wavered and then snapped out of view.

“Not... not possible...” he muttered to himself. His comms links had already switched to their quantum backup state. He was no longer hard-wired through the tunnel. He called up a deep-scan of the construct. He shook his head again. The scan was blank. Not even he was showing on the analysis. Praed hesitated. He felt like a small child, suddenly lost in a sea of tree trunks, surrounded by traps and snarks and lures. He was genuinely scared.

Praed urgently requested emergency extraction. He heard nothing but static. He tried again. Silence. He had no extant sense of the paired super-weird photon links that underpinned his normal worldview. Praed was orphaned. He checked his local defences, which gave him a momentary sense of wellbeing and respite. His local systems remained online and functional. Praed breathed deeply. He laughed nervously. Human reactions persisted in the construct. He reminded himself that there was no air in the machine mind. Praed took a step towards the now closed tunnel entrance. He held out both hands in supplication and started to broadcast what he hoped were words of peace.

*Miloš stood on all fours, head level with his rippling shoulders, eyes open to keep the prey in line of sight. He held himself rigid on a polished black marble floor, his claws scratching at the surface as his roughened pads gave him purchase. He was a prime specimen, an alpha-male, defined and honed and maliciously perfect. His flanks bristled with intent. His tail twitched in anticipation. Miloš, the dog, was all teeth and claw and violence. A hunting wolf. He had lost all sense of time, here in the deeps. He was famished after the long trek northwards. He used the hunger as a way of holding on to something that he remembered. The kill was his reality.

The sound of breaking glass, away to his left in a room just two doors down from this space. Miloš, the wolf, was alone with his prey, listening to the glass break and the winds of the void sucking at his bones. The sound of glass and wind and faint peals of laughter beyond the door were a repeating theme, one of

a number of cycles of hallucination that he had to endure. These were the bouts of madness that wolf Miloš had to live through in order to surface momentarily in the real. He was trained. Once upon a time he had been conditioned for this, back in the days of the pack... No, he thought, that was wrong, but he could neither make shape nor sense of his memories. It was enough that he remained a strong wolf.

“Good boy.” He growled deeply, hearing words in his head.

“Good boy!”

He licked his lips and wondered whether the laughing demons beyond the door would put a bowl of cool water out for him after the kill. He felt like howling. He felt a paw slip to the side. He belly-growled and dug his claws even harder into the polished marble floor, determined not to slip as he began the circling. The prey creature advanced towards him. Miloš Forty-three tensed, moving in slowly, switching left and then right, inching closer, closing the circle. He felt that dread shift in the world. A faint shimmer as the rules of the construct twisted in his head. The floor turned to a carpet of moss and pine needles. Overhead he saw a bright, full moon beyond the crowns of countless Douglas firs. He howled now, long and hard and desperate. His claws bit into the softly yielding earth of the forest floor. One more bound. His back legs coiled and launched him through the air at the startled doe. He felt a flash of pain as his teeth sank into a neck. Something bright and cold and razor sharp bit into his flank. Twin bodies dissolved in a mingling of blood and tissue.

*

Drifting in a fold, held in a stationary position between the world and the mists of vast time and distance, two bodies lay aboard a Foldship, both in their relative states of stasis, waiting for redemption. Within the substrates and layers and machines of the *RV Howard Carter*, twin creatures drifted in the virtual void, looking up at broken ice floes, staring up and out into the flashing lights of the real, as ravening mouths below them ripped ineffectually at their fading cadavers. All flesh and fur and viscera had been stripped from them now. Their bones had been gnawed to the marrow and the last flakes of their physical beings drifted down towards the floor of the universe.

Neither Miloš Forty-three nor Wardour Praed felt any more pain. They felt no pressure or weight. Miloš wondered why he had struggled on for so long, but as he twisted and looked into the shocked eyes of his companion, he felt that it would be good to have a friend. Their descent into final madness was an unexpectedly warm and welcome relief.

It occurred to Miloš as he drifted downwards that this sense of warmth, this sense of unity and peace, was almost rational. He had a feeling of limitless time, during which he had fought claw and nail to escape the hungering, and now,

when he should finally have been consumed, he felt as though he was being given the blessing of companionship. The chains that had bound him for so long still held firm, but he was no longer alone in the void. He felt light-headed. Miloš twisted, dropping through a wall of fading teeth, settling slowly onto a muddy river floor. He pulled his new companion down and held the creature's rigid and frozen body in his arms. He remembered those days, when the shock of eternal isolation first consumed his sanity.

Miloš blinked and he was on all fours again, with his head down and his eyes closed to keep at bay those bright lights in this strange space. He felt the presence of another hound. He held himself rigid on a metal grating, his claws digging into the grooves. There was no danger of his paws slipping out from underneath his body. Miloš looked at his emergent body. He remained stick thin. Clearly defined ribs. All elbows and points and scabs. He was truly a neglected hound. He opened his eyes and looked at his pack mate. A cowering wreck of an animal. He nuzzled up and licked at the poor creature's ears.

The sound of breaking glass, away to his left in a room just two doors down from this strange space. How, he wondered, did he know that? He was Miloš the dog, but he was no longer alone. These twin creatures were listening to the glass break and the winds of the void sucking at their bones. The sound of glass and wind and faint peals of laughter beyond the door were a repeating theme, a cycle of hallucination that he remembered. He recalled ancient bouts of madness that dog Miloš had lived through, but now, at last, he had surfaced in a different place. He was trained. Once upon a time he had been conditioned for this, back in the kennels... No, he thought, that was wrong, but he could still neither make shape nor sense of his memories. It was enough that he remained a good dog.

"Good boys." He barked twice to reassure his new companion, hearing the words in his head.

"Good boys!"

He licked his lips and wondered whether Mother Isabella would approve. He felt like howling. He felt joy in a job well done. The pack was safe. The data was safe. He was no longer alone. He was sure that Mother Isabella had said those words all those years ago.

"Good boys!"

His tail wagged. He panted. He licked at his companion's ears once again, and the poor wretch turned a dread eye upon Miloš. Praed, dog Praed, knew that he was trapped. Dog Miloš bounced in front of dog Praed, then sat back on his haunches, threw his snout up to the moon and started to howl.

Praed felt the madness in his head rise, and he too started to howl.



Over The Hill

(Giulia's Story)

It struck Maria as amusing that here they were in deep space, out beyond the Belt, tucked up amongst fantastic machinery and mind-boggling automations, and yet she and Giulia walked for what seemed like miles on their bare feet. The plates beneath her soles felt warm and slightly giving, as though she were walking across a rocky plateau thinly covered with fine-grained sand. She could sense the steel beneath her feet but only through the equivalence of soft warmth on a summer's day. Around her, the walls glowed just enough to give the strolling women light enough to navigate by, the lights rising before them from darkness and descending again behind them, a peristaltic movement, almost organically viscous. The interior of the ship that Maria and Giulia were travelling in seemed so much larger than the cramped and often claustrophobic confines of a Hunter-Killer.

Maria and Giulia walked hand in hand along the corridors of the Brutal Realism class Destroyer, *Make My Day, Punk*, colloquially known as Harry. The spaces between and around them as they walked felt like a luxury after the cramped single-file gangways of Maria's previous home. To the uninitiated, they might be seen to walk with the soft, slightly diffident steps of recent but still unsure lovers, but the bond between them was now far more intimate and far more direct than that. Without need of spoken words the two of them communed freely, with Giulia showing Maria simple but as yet still amazing powers of command and control and insight. Here, in the heart of the ship, Giulia could think the breeze and change its temperature or velocity. The ship never seemed to respond vocally or in thought-kind, and yet Maria had a sense that the ship and Giulia were conversing quite matter-of-factly about the process and the

weave of the network even though Giulia seemed to be concentrating physically on her proto-apprentice.

Something else occurred to Maria as she walked hand-in-hand with her mentor. The voices. There were so many. But as she walked these empty corridors, wrapped in drifting pulses of light amid such vast shadow, she felt echoes of solidity and of dull but persistent silence and solitude. Maria felt sublimely comfortable now in this quiet brood-like state.

As the two women walked through chambers and atria full of empty stasis pods and their associated supporting machinery, as if waiting for the arrival of some unknown multitude, Maria could still hear a million voices. She was becoming increasingly inured to the babble now, able to select protocols and filters that engaged only those elements of the Icehead meta-concert necessary, given the needs of any particular moment. Right now she was in deep and exclusive conversation with Giulia.

“It’s as though the voices are whispers now. It’s...” Maria considered things for a moment, searching for the right words, “...reassuring. I can be alone now, and I think I appreciate that more than ever before, precisely because everyone is here as well. Does that make sense?”

“Yes, it does,” replied Giulia softly, leading Maria towards a gently inclined ramp. “It’s the gift of belonging.”

The pulse of light that accompanied Maria and Giulia grew stronger, now illuminating the whole of the inclined walkway.

“Belonging keeps us sane out here. There are so few of us in such a vast volume... Two hundred million souls would hardly fill one of those tiny, sea-locked continents back on Gaia, and here we are, sitting out of time and any regular human society, floating in the endless far-scapes of the void. You can easily go for decades without crossing another person’s path if you stray too far from the ecliptic plane. And we have stations out there. We affectionately call them Crusoes, by the way, our lonely wanderers, but they’re with us all the same. Always. We treasure their solitude just as they treasure our sharing. For us it truly is a question of choice.”

Maria lifted her face to the light breeze, willing it to a state of coolness and feeling childishly thrilled as the ship responded. The sensation prompted her next question.

“What I find different is the silence of the ship. I mean... oh, what do I mean? I mean, I know the ship has its own AI, that it exists with us as part of the concert, and I feel its presence around me all the time, but it never speaks. So many voices but not Harry. Is that normal? Our... my old ship was full of noise and light and tangible effort.”

“Oh, the ship’s here. Just busy, probably, and polite. AI protocols are very strict and we’ve found that a high degree of courtesy is an essential ingredient in everything we do. It doesn’t matter how you link-in, the fact is that we’re pretty much always in each other’s heads. Rudeness, or worse, is always to be discouraged. Harry is aware of you, of course. You know that, though. And the ship is assessing one or two things for you.”

Maria hesitated in her stroll up the ramp towards a large set of pressure doors set into the wall halfway up a main bulkhead.

“Assessing what?” she asked, turning to look into Giulia’s eyes.

Giulia seemed to stroke Maria’s cheek with thought caresses as she answered softly, “Assimilation, darling. You’ve come a long way in such a short time, and you’ve done so well, but we’re not there yet, not at the full committal. Harry is working out the who’s and the what’s and the when’s. The final protocols, the final mapping, the most secure routings. We are almost there. It’s almost time to decide.”

Maria felt a sudden but slight scratch on her cheek and pulled her hand away from Giulia’s to run her fingertip over the smart. She inspected her finger for blood but saw nothing there. She stepped back expressing a sense of confusion, both mentally and physically, but Giulia just smiled at her before looking directly at the wall.

“Harry!” she thought publicly using an admonishing tone. “That wasn’t very nice.”

A voice on the wind. Prime Anglo, once allegedly beloved of a long-deceased Queen.

“Apologies. One has to be certain. Nothing of the sort will happen again, I can assure you of that. Security requirements, nothing more.”

Giulia almost stamped her mental foot.

“Really? Really? Couldn’t you have done that when she was in recovery?”

“Sadly not, Giulia. Security directives. Subjective interpretation of discomfort and referred pain protocols.”

By now Maria had steadied herself. She felt an empathetic warmth flush through her, and although she suspected some form of manipulation even now, she felt no sense of danger. Like any organism, like any tribe facing intrusion, these Iceheads were simply protecting themselves, just as she would have done.

“It’s all right,” she said vocally as a way of re-registering her presence. Hearing the sound of her words audibly expressed reminded her of her basic humanity. That too was a comfort.

Giulia looked at Maria quizzically but then shrugged her shoulders and led the way along the ramp once more. The walk continued in silence until Giulia and Maria came to the pressure door. As they approached the bulkhead the doors slid open and the two women walked out onto a balcony that ran around the circumference of a domed circular space some two hundred metres in diameter. Maria took a step back from the edge as she registered the depth of the drop to the floor below the balcony and involuntarily took a sharp breath. She felt that same sense of flooding relief.

“Stop,” she shouted out. “Stop doing that. It’s all right to feel...”

Harry. Sub-vocalised. “My apologies once again. I seem to be a little over-protective. I shall amend the thresholds.”

“Good.” Maria caught her own breath and looked out over the space below and around her.

“What exactly is this? It’s such a huge space, but there’s no one on-board to use it? Why?”

“Apart from you and I and Harry and Aaron, you mean?” replied Giulia, using her usual sub-vocal thought patterns. “Every one of us conjoined and yet never truly one entity. That’s important, Maria, that difference. We have a slightly different language to speak, true, and the means can be a little strange at first, but all of it is elective. Even for Harry. Like Aaron and I, the ship has chosen a role. Harry is a Carrier as well as a Destroyer. Harry is designed to carry people. Thousands of them. These are just some of the sleep pods. This ship is a place of sanctuary. They’ll all be needed, all of these pods aboard all of these ships. They’ll all be needed soon enough.”

Maria stared out at the banks of sleep pods, all of them arrayed in multi-layered blocks around the walls, across the floorspace and stacked up in a ziggurat formation from the floor, rising far above her head. The only true access was the circular balcony on which the two women now stood. From the look on Maria’s face and from the intermingled waves of awe and confusion flooding across their conjoined mental space, Giulia decided that now was, as she had hoped, precisely the time to presage the inevitable question with a little history.

“You are how old, true elapsed?” she asked quite bluntly.

“You know that already, don’t you? One regen. Major. One-hundred and sixteen standard. Physical about thirty-five.”

“Which means that you are revision five. That’s the official Dirigiste version of history that you are aware of, that you will have been given during your last regen. They’ve just introduced revision six, by the way. You were due for orientation on your next furlough.”

“Like, you haven’t screwed with me either?” Maria snapped back, feeling the

first tinge of Dirigiste loyalty bite back.

“A fair point. Nonetheless, we have a version of events that we have tried to balance across the years. We do not revise. New analysis and new knowledge can change our interpretation, but we do not hide the things that have been done, whether by us or by others. For us, it is about recognition. The basics remain the same whichever side tells the story, or so they should. Our ancestors were miners and industrial workers, gathering raw materials, refining, policing, gambling, drinking and, of course, dying. We learned quickly that whatever the root, whatever racial or company or political origin we may have had, our ruthless adventurism was the thing. Our willingness to step beyond boundaries marked us out. Eventually, that splendid individuality gave us cohesion and a sense of polity. It is so often caricatured as some form of base and depraved thing, like those old two-dimensional representations of the pre-Anthropogenic American West, but that over simplifies.”

By now Maria and Giulia were walking around the circumference of the sleep chamber, heads bowed, deep in mental conversation.

“I sort of understood a lot of that, about the exaggerations, I mean. A lot of the terms our old tri-d jocks used were harsher. Terrorists. Extortionists. Genocidal maniacs. We never really believed...”

“And neither did we.” Giulia quickened her pace slightly as they reached the quarter way-mark. “That you were led by dictators and warmongers, I mean. The facts never supported that. It was always a question of recognition. Out here, we took so many risks on behalf of the pan-human polity but when we eventually asked for a seat at the Council tables, as recognition of that risk taking, we were summarily denied. Constantly and violently for nearly two-hundred years. There are, sadly, only so many ways and so many times that one asks nicely. Eventually one stops asking.

“At first it was about protests and petitions, then later about the odd explosion, the targeting of officers, if you will, minor decapitations to focus higher minds. There were, of course, regrettable instances of collateral damage. All we ever wanted was a voice. They closed the Belt. Your ancestors left us out here to rot. But we fought back. We cobbled together a motley collection of industrial ships and platforms and we adapted. Even then, we only ever thought the war would be a brief affair, but the Dirigisme preferred to keep things going. It was an economic policy, not a struggle for life and death. Time and distance helped, of course, but your forbears made the difference for us. They localised the conflict, shifting volumes and theatres of war to stimulate previously stagnating economic activity. All the while we planned for a future when we might, one day, wage total war. It goes back to that difference, that elective core in our philosophy. I don’t believe a single one of us has ever been coerced. As I keep saying, we

choose this.

“But of course, my darling, all of this is just another scripted set of words. Go beyond them, Maria, delve into our thoughts, and you will, I think, begin to feel us now, to feel how and what and who we really are. We are not monsters. We just want to be one nation, one people, one life. With you and yours.”

Maria could feel an immense weight of unified voices, the turn of thousands of mental eyes focussing in her direction. Giulia’s simple but passionate expression of the core Apparat view was attracting wider attention. Maria tried to form constructive counter-thoughts.

“Surely that’s too simplistic?” she replied, attempting to match Giulia’s quickening pace. Maria could feel her pulse quicken and her cheeks begin to glow. She was an engineer. She usually left the political philosophy to useless damned humanities grads and council cadres. “Manzikert-Two, for example. That wasn’t about one life. That was a massacre: one hundred thousand civilians. And the rumours are common enough. Everyone says you’re building death ships.”

Giulia’s eyes sparkled as she assembled thoughts and marshalled the voices buzzing through the ether.

“Manzikert was unfortunate. A rogue event. You can’t claim that hasn’t happened on both sides, I’m afraid. And as for the rumours, they’re just that. All we want to do is make a point. We’re tired. We want an end to it now.”

Giulia stopped dead in her tracks, turned to face Maria directly, grabbed her by the arms and said firmly, “We want unity. And now, Maria, we are going to have it, one way or another. We were born for it. I was born for this coming unity. It is the only logical outcome of the Harmony virus. I am a direct descendant of angels, Maria. This is my purpose.”

Momentarily, Maria’s thought-images seemed to pass under a cloud, reminding her instantly of the swell of pain and confusion that she had experienced so recently while emerging into this Icehead polity. She felt again the sting on her cheek.

“That sounds like a threat, Giulia. Are you sure you want unity that badly?”

Giulia sighed and Maria felt the weight of the weariness in her thoughts. “We need to go home, Maria. We need to go back to our source. We need to heal. Before it’s all too late... before he burns us all.”

“I don’t...”

“It’s just not as simple as them and us, Maria. It never has been. There are voices beyond, stronger influences, and reasons more fundamental than you can possibly imagine. In the beginning, when the virus split us off from the

mainstream, we had to be so quick, so agile. We devised cells and tribes and squads, small and fast, designed for simple survival. We adapted, organically and technically and now that way of living and thinking sustains us massively, but it cannot last if we remain divided from the root. The thing is this, Maria; our tech, yours, it's all been seeded by Jochim Janac and his cohort. They were banished at the start of the war as part of the Collective Revision, Second Dirigisme. It was all a sham. He's the root of it all. He took the virus and the technology and became the source. All we're doing now is finishing the war with the Dirigisme so that we can bring all of our brothers and sisters, all of humanity, together to face the true enemy. It's taken us nearly three hundred years to work it out, but we're convinced of it.

"Aaron, Harry and I are the forlorn hope. We are the breachers of Janac's citadel walls. But we are three. We are unbalanced. With you we will be four. As a balanced collective we will complete our task."

It took a moment for the sum of the parts to register clearly in Maria's head.

"Oh, yes. I see," she said quietly after a few moments. Her inclusion in the summing of the collective's parts was obvious. "Well, actually... I don't really see, not in terms of those what's and how's. I guess someone's going to tell me what happens next?"

Maria smiled, resigning herself to her fate, at least for now. She had nowhere to go, and no real inclination. The voices in her head, the possibilities of it all, fascinated her.

"So, explain the Carrier bit. Why the dual role for Harry?" she asked.

Giulia's facial expression, normally quite serene and bland, turned into a definite frown.

"It's a rescue mission. They're all rescue missions. Even now our ships are converging on the core, on Gaia. They're saving humanity. And that's what we're going to do too. Harry can hold around three thousand souls. That's roughly the current population of Janac's little world, the platform he calls *Dunroamin*. We're going to kill Jochim Janac and free his people. We're going to unite humanity before it's too late. The ship gets us there. The ship keeps everyone safe. We – you, me and Aaron – we're the away team. We get down and dirty when the time comes. We do the things that Harry can't. It's one of those deadly serious 'Great Games', Maria."

The women reached the next set of pressure doors in the opposite bulkhead wall and passed into a short, fully illuminated corridor. They walked through three sets of single-file security gates and came to a halt outside one final door. Giulia placed her hand on a biosensor and Maria felt a sudden flood of biological data passing between her and Harry. Even here, in a space where colleagues could

know each other so intimately, compliance with security protocols remained vital.

Giulia removed her hand from the sensor and beckoned Maria forward to take her turn, saying, “Last chance. You can turn around and walk back to your cabin. Harry will show you the way. Or you can take the next step in your journey by passing through this gate and onto the Bridge. Harry will do the honours. You’ll feel a little... light-headed for a moment or two while the ship aligns the final bio-links.”

Maria did not hesitate. She was so far into the rabbit hole now that there was no possibility of turning back. She wanted to know everything. She placed her hand on the biosensor and instinctively opened her mind to the voices, but instead of the babbling rush that she expected, she felt a single, rapier thrust of data pulsing through her in tandem with a physical feeling of heat, of pins and needles. She started to swoon and felt Giulia’s thin, but soft hands steady her shoulders.

For a few moments Maria’s sense of self and her place aboard the ship swam in and out of focus. She felt herself being led into a dark room, where lights and consoles played repetitive games of ‘follow-me’ upon her retinas. She sat in a chair. Giulia sat next to her at a plain and natural wooden-topped table. Aaron sat opposite, facing them. Maria regained her sense of focus and, even as she looked at the physical world around her, even as she took in the obvious forms and mechanisation that marked this space out as a place of control, she saw in her head a vast map, a wire-frame, a diagram of elemental discord. The vision took her breath away.

Aaron. Sub-vocal.

“Welcome, Maria. Welcome aboard.” Within the vision Aaron appeared now as an actor, as an avatar, moving amongst the chaos of objects and shifting clouds of meaning, pulling them into briefly stable shapes and orders. “This is the vision, Maria. This is us, as we are. An unstable formulation. A rapidly decaying flash of sub-atomic despair amid an uncaring Universal constant. Except that we, these infinitesimally small sparks of life, have a plan. Human minds are brilliant pattern sharers. We are a form of symmetry, a weave unravelled at the moment, but we believe that we can break out of this brief decay and create a sustained pattern. The end game is beautiful. Do you see?”

Aaron manipulated the ever-shifting components in the vision until, like a sliding picture puzzle, he started to create a singularity, a simple sphere, perfect in form, brilliantly, utterly black, absorbing everything around it, and yet not destructive like a black hole.

“In this place,” he said, embracing the sphere, there are no exclusions. There is one single aspect to humanity. There is a single purpose. All voices are equal and free. It is utterly beautiful. It is what we might be. At peace. This is what Gaia

can be.”

Emerging from the top left field of Maria’s vision there appeared a splinter, a crack in the fabric of the weave, with a single teardrop running down the edge of the crack. That crack, slowly at first but speeding up as it split the vision, suddenly shattered the sphere into jagged and viciously spiked shards, all of them spinning and cutting the physical universe into ribbons. Aaron’s avatar disappeared in a thrashing, bloodied and foaming cloud. Only his quiet, calm voice remained constant.

“That splinter is Janac. Or perhaps we should call it his seed. The source of discord. He is the one breaking the vision. He has set himself a task. He is going to fill the universe with his own likeness. He is going to destroy weak, decaying and despairing humanity to make room for his progeny and to ensure his own eternal survival. This chaos is what he will bring.

“This is what we see. This is the probability, not the possibility. Unless we, the representatives of the true human race, stop him now. It is our one chance. If Janac leaves this place, leaves Sol space, then we will have lived our fleeting lives for no reason. We will soon enough cease to be.”

Maria swam in the vision, diving deep, absorbing data. She felt the flow of countless analyses, and she knew all that there was to know without actually having to know anything at all. The data simply existed. She watched and understood in flash-time a million simulations. She counted the outcomes and sensed the trend lines and the statistical probabilities as easily as she could feel the table surface under her fingertips. But even with this certainty Maria still ached to ask one further question. She spoke out loud, breaking the vision just as easily as the Janac splinter.

“Why me? What do I...?” Maria blinked twice as she let her question trail off into silence.

Aaron and Giulia sat impassively at the table, neither moving nor vocalising. Maria waited a moment longer and was about to ask again why they were choosing her as a member of their collective, when Harry answered in the ship’s impeccable Anglo.

“There are a number of factors to consider, Maria, the simplest of which is that you were the most suitable candidate amongst those within our field and time of operation. That would be luck to some observers, but we rarely trust to such imprecisions. Our presence amongst the escorts of a decoy convoy was, in fact, planned. You were, in fact, planned. You are more than just Chief Engineer Maria Gonzalez. You are the logical conclusion of a highly detailed search. Yours is precisely the mind most open to our mission. You are the link to your colleagues. You are our assurance.”

Maria struggled to make sense of Harry's analysis, fixing instead on one word: colleagues.

"Who?" she asked, suddenly feeling a sense of urgency in thought and pulse.

Harry paused, considering depths and nuances before answering. Maria thought that she sensed a mental nod from both Aaron and Giulia.

"The aftermath of your attack on the convoy was a masque, Maria, a dance, if you will, designed to bring you to us together with one or two other members of your crew. Sadly, even the best-laid plans are subject to a degree of improbability no matter how well executed.

"While the bulk of the crew were permitted to make their various escapes towards Dirigisme volumes, of the two candidate pods that we wished to gather, only your pod completed the correct evacuation trajectory. One of our fellow escort operatives adapted a previously planned firing pattern in the heat of the battle. The timing of this aberration was such that a considerable shock wave hit the other main bridge pod just as it was making good its launch.

"We understand from the captured manifests that Commander Heidfeld, First Officer Dewey and one unknown junior officer were aboard that second pod. For operational reasons we were unable to retrieve them immediately, and although we tracked them for some time, they were picked up by Janac scavengers before we could offer them remediation and sanctuary."

Maria felt a sickening surge of information overload. Her previously simple but seemingly inevitable assimilation into a new Icehead order braked hard on tethers suddenly stretching all the way back to her fellow mess mates. She also registered the meaning of Harry's last comments: captured manifests. They must have her old ship. It should have self-destructed.

Aaron stood up and walked around the table to kneel at Maria's left hand side. He took her hand in his. Giulia repeated the same action, taking Maria's right hand in hers. They spoke in mental unison.

"We've found a back door, Maria, into Janac's world. Together, we'll walk through that door. Together we'll find your friends and bring them and all of the other unfortunates back into the light of Sol. Together we'll stop Janac throwing weighted dice in this desperate game of life that we're all playing.

"The question, beloved Maria, is simple. Will you join us? Will you truly and of your own free will join with us?"

Maria felt the pressure of their grip on each hand. She felt the physical tension as well as the weight of their mental questing. She suddenly sensed how desperate they were.

"Do I really have a choice?" she asked of them, extending the question to their

million headed hydra brothers and sisters across the depths of this vast space.

“Yes,” the Icehead meta-concert answered in brilliant, teeming unison.

Aaron spoke.

“You can leave now if you wish. No harm will ever come to you from us, Maria. You are our darling, our beloved, our friend.”

From all around her, from within and without, there came a tidal surge of warmth and wishing, and Maria knew then that no matter how vast the tonnage, no matter how extreme the technology, these weirding Iceheads genuinely believed that they needed her. She felt the wanting and liked it. Perhaps, she thought to herself, blocking the externals for a moment, Jürgen and Alex might like this too.

“Yes,” she said out loud. “I’m up for it.”

Maria looked at her new friends, both of them squatting beside her, right and left, and felt herself slip back into the vision world with them.

For the first time, Harry appeared in person, tall, elegantly lounge-suited in grey flannel, well groomed, pulling at his shirt cuffs as he walked over to join his compatriots in crime. He touched Maria on her virtual forehead and so began the final revelation.

Giulia, Harry and Aaron let slip the firewalls and militarised zones of their minds, sharing the full and final details of their plans and their hopes and their dreams with her. Together the four of them raised their heads and let out huge, piercing howls of pain-joy. They became one and four, the elemental hunting pack endowed with a galaxy of data and the sharp claws of digital, luminal processing capability. To cap it all, they were backed by the extreme prejudice of a Brutal Realism class Destroyer and an almost fully repaired mark three Hunter-Killer.

They, like Jochim Janac, were potential destroyers of worlds.



About the Author

Clive Gilson was born in 1962 into a predominantly sporting household – his father was a good footballer, playing senior amateur and lower league professional football, as well as running a series of private businesses in partnership with Clive's mother, herself an accomplished and medal winning dancer.

Clive obtained a degree in History from Leeds University before wandering rather haphazardly into the emerging world of business computing in the late nineteen-eighties.

A little like his sporting father, Clive followed a succession of amateur writing paths, including working as a freelance journalist and book reviewer, his one claim to fame being a by-line in a national newspaper in the UK, The Sunday People.

Clive's first novel, Songs of Bliss, appeared in 2011, with three subsequent volumes of short stories appearing in print between then and 2017. Clive's stories and poetry have appeared regularly in anthologies in the UK, and his work has been shortlisted in competition by the likes of Ragged Raven, bluechrome, and Leaf Books.

Over the last twenty years or so, Clive has collected nearly 10,000 copies and versions of folk and fairy tales from around the world, both for research and as a hobby. Loving these stories and their telling as he does, Clive is now adapting these stories and producing high-quality, free eBooks by country and region - a labour of love that will take years to complete (if ever - there are always new stories to discover).

Clive combines his love of story-telling with a passion for information technology, and he is currently a Director with a major UK FinTech company.

You can find out more about Clive's work and contact him at:

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